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## Original Communications.

### The Essentials and Non-Essentials of Physical Diagnosis.

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The following is a synopsis of the address delivered by Dr. Richard C. Cabot, of Boston before the Jefferson County Medical Society in Birmingham Friday, April 17, 1908, condensed from the short-hand notes taken by Dr. J. E. Garrison. No effort is made to give a verbatim report, simply the gist of the text:

He prefaced his address by stating that all new books on the subject now give multiplicity of various tests and methods of examination, but that in his opinion there are only a few of the newer tests that are really of any considerable value, and that these, when done by a man accustomed to making them, can be made in about fifteen or twenty minutes.

He stated that whatever method or system the physician adopted in making his examinations should be made in some definite order, as by so doing there is less liability of anything being omitted which otherwise might escape attention. Any system is all right if regularly followed, but his custom for years has been to begin with the head and go down. Besides the obvious points which a good look at the patient reveals, we should note especially the following:

First, in examining the head the ears should be noted, especially the

rims, little gouty deposits, tophi, are occasionally found. By not making these ear examinations, cases of gout are frequently passed over unrecognized.

Next, examine the gums. These may give evidence of chronic lead poisoning. He emphasized the fact that the text books give one very often the wrong idea of the appearance of the gum in lead poisoning, describing it as a blue line, when, in fact, the distinct blue line is never found, but that there is more of the appearance of irregular black points along the free margin of the gum.

Passing down to the chest, he paid particular attention to the early diagnosis of incipient tuberculosis, stating that it is very important to make this diagnosis at the earliest moment for the welfare of the patient. He related an incident in his post-graduate teaching in which a large class of physicians were given about forty patients with incipient tuberculosis for diagnosis and study, and they reported to him negative findings physically. Upon his demonstrating to them that these patients were ill, the physicians remarked that it was evident that they had been letting many cases of incipient tuberculosis go undiagnosed until it had advanced considerably further, thereby giving the patients less chance.

These patients may not have any cough, and there is no dulness. The earliest signs are a few very fine, crackling rales after coughing. There is no successful way to examine the lungs without making the patient cough and quickly catch the breath afterwards; also have him take full breath, let it out, and then cough, a hard thing to do, but valuable. Listen just before, during and after the coughing. He said it is necessary to examine these cases in a quiet closed room, and to use the same stethoscope constantly, so as to be familiar with its own abnormal sounds, that they might the more easily be eliminated. He advised the moistening of the bell of the instrument in passing from one portion of the chest to another, and also to wet the fingers holding the instrument, as by doing this many adventitious sounds of the instrument are avoided. These little rales above named under these precautions may be the only thing which will be heard in this condition, and if they are present at an apex and on repeated examinations, the physician may be pretty certain he is dealing with a case of incipient tuberculosis.

He advised giving the patient sometimes a dose of morphia at night, and then examining him next morning before he gets up; there will then sometimes be heard little rales which would otherwise escape.

Another early sign is cog-wheel or interrupted inspiration. This must be distinguished from the cardiac respiratory murmur and must be localized, as if heard all over both lungs it may not be of any importance.

Next is the tuberculin test, which should be used when there is any doubt. It is used mostly by subcutaneous injection, after which the patient simply has his temperature taken every four hours, and the fever is noted. The first dose should be not more than 1-10 milligram. It is not necessary to wait until tubercle bacilli are found before making a diagnosis of tuberculosis, as by so doing the patient may be neglected when he cannot afford to lose the time in which he should be treated.

*Pneumonia.*—To save the patient's strength and yet get a thorough examination, make him use the whispered voice, having him utter some words, as ninety-nine, in a whispered tone, while you shift the stethoscope from point to point over the chest and find where the whisper is intensified. This gives us the earliest localization of solidification. The hand (tactile fremitus), is not used as it should be. Fremitus and the whispered voice should be noted more often. Failure to do this often causes us to diagnose and treat empyemia as unresolved pneumonia—a rare complication. In empyemia, tactile fremitus is usually lost, in pneumonia it is increased.

In his opinion there is very little to be learned from an X-ray examination of heart and lung diseases which cannot be told by other methods of physical examination in the hands of every one. It is good to use an aneurism and in empyemia between the lobes of the lungs.

*Back.*—In examinations of a patient, it is always necessary to carefully go over his back. Aneurisms, hypertrophic arthritis, etc., may be thus found. Have the patient stand in front of you, with his feet together and his hips and knees stiff, and direct him to bend as far as he can, first to the right then to the left. If unilateral limitation of motion is elicited in the act its cause may be arthritis deformans in the spine. Pains treated as sciatica result from arthritis and are relieved only by plaster spinal jackets.

*Routine Examination of the Abdomen.*—Feel for the spleen, for the liver, percuss for ascites, and run the hands over the rest of the abdomen.

*Arms.*—Put your hands on the patient's shoulders and slide them down. In alcoholics you will note the peculiar smooth, satiny feel of the skin, which in these patients result from the subcutaneous deposit of fat caused by the alcohol.

*Legs.*—Test the knee jerk in all cases, and note whether there is edema. Sometimes it is desirable to know just how much attention should be given to the statement of a patient complaining of a given pain. As a rule, if the knee jerk is very lively, there need not be given so much heed to the complain of pain as if the jerk was normal.

*Fluids and Feces.* Urine.—He emphasized the fact that there is a great deal which may be eliminated in making urinary examinations, which is given in all the text books on urinalysis, stating that many tests advised are absolutely valueless and time consuming. He said that the urine should *always* be examined, and that the tests necessary will not require longer than five minutes when we become accustomed to making them, and to feel sure that we are correct in our findings. The most important test is that which requires the patient to do most of the work. Have him collect all the urine passed from 7 a. m. until 7 p. m., and from 7 p. m. until 7 a. m., and measure separately the number of ounces passed in each 12 hours. Increase of night urine means chronic nephritis. Test it for albumen, and remember that the amount of albumen found in any specimen depends upon the amount of urine which has been voided in the 24 hours. The width of the ring in the nitric acid test is greater in concentrated than in dilute urine.

Routine urinary tests should be as follows: The 24-hour quantity, if possible to obtain, the color, reaction, the specific gravity, the amount of albumen and sugar. There is no need of making examinations for casts in urinary sediments. Casts are found in all urine, in that from the healthy patient as well as in those who are sick. There are some cases of nephritis without casts. Cells and crystals are found, but do not mean anything than we need to know. A renal cell cannot be told from any other cell. Crystals mean nothing. They occur in health,

Notring is known of their cause. There is nothing known as to the relation of uric acid to disease. The examination for urea is a great bug-bear. There is nothing which we can tell with it which we cannot tell without it. The amount of urea depends largely upon the diet.

The tests for indican, chlorides, sulphates, and that sort of thing, are of no value. Simply examine urine as to its specific gravity, color, reaction, sugar, albumin and the 24-hour quantity. If there is any pathological pus or blood in the urine we can see it with the naked eye. Sometimes it is desirable to know if the pus or blood comes from the kidney or bladder, and he gave a simple method whereby it can be done without loss of time on the part of the physician.

The patient micturates each time into a separate bottle and marks the hour on it. The bottles are arranged in chronological order and allowed to sediment. In cystitis the sediment is about the same in amount in each bottle. In kidney-pyuria the pus is equally distributed; some bottles contain little or none, others a good deal.

*Blood.*—There is need of making but few blood tests. The amount of haemoglobin may be readily determined with the Talquist scale. There is no use whatever making tedious blood counts, and he would not advise making the red cell count unless the haemoglobin test shows diminished corpuscles. The leucocyte count is of value in cases of doubtful fevers and whenever splenic or glandular enlargement is found and he advised that is be done regularly in such cases. Especially is it of value in leukemia, but this is a rare disease.

These tests at first require time, but soon one acquires facility in making them, and then three minutes are enough.

He referred to the stomach tube, but does not place much faith on the chemical gastric findings. The importance of the tube is that it gives us an idea as to the size and work of the stomach, that is, its *physical* aspect. He suggested that the first person on whom a physician should always pass a tube be himself.

*Faeces.*—There is very little to be said on these examinations and the principal thing to be learned thereby is the finding of parasitic eggs. He said it is easy to recognize these eggs after we have once seen a few.

*Heart.*—He apologized for having omitted the heart in its proper examination in going over the chest, but said the most important thing

to know about the heart is its size, and that the simple things, as those found with the eye and with the hand, such as noting where its impulse is, its force, etc., are the most important. Too much attention is paid to murmur heard with the stethoscope. He said that the vast majority of heart murmurs have no connection with heart disease at all, and advised that no attention be paid to them *unless there are other evidences of heart disease such as enlargement or change in the second sounds to back up the murmurs.* We cannot make a diagnosis of heart disease from murmurs alone. If the heart is enlarged, or if there is a change in the pulse, or in the second sounds, then there may be heart disease.

*Blood Pressure.*—This method of examination seems to have come to stay. It is done at the office with more ease than at the home. When blood pressure is raised it may be an early sign of kidney disease.

He said that it is frequently advisable to test the feces for occult blood in cases of suspected gastric cancer or ulcer (guiac test). Avoid the possibility of hemorrhage from the rectum, piles, and never make the test in persons who have eaten meat (and so perhaps blood) within two days. He said that the patient who is to be thus examined should be advised not to eat any meat for two days before coming for this test.

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## Epidemic of Jaundice in Talladega.*

*By D. P. Dixon, M. D.*

*Talladega, Ala.*

During the summer and fall of 1907 about two hundred cases of jaundice were seen by different physicians of Talladega. There were probably that many more who were so slightly affected that they never consulted a physician.

I find that H. Peck, in *The British Medical Journal* of December, 1901, reports an epidemic almost identical in character to this one, occurring in Derbyshire, England. He reports having collected sixty-nine cases in all, but thinks there were quite a number of others.

Kershaw in the same Journal mentions having 150 similar cases oc-

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*Read before the M. A. S. A., at Montgomery, April, 1908.

curring in the district in which he practiced. This district had a population of about 26,000, but most of the cases occurred among working classes. They were well clothed and well protected from the weather.

Nothnagel states that Hennig has collated eighty-six such epidemics from literature. Some of these dating as far back as the beginning of the eighteenth century. This report was made in 1900. Eight of these epidemics extended over a considerable area, but these were near the seashore. Only five lasted for any length of time—seven to thirteen months. In three, children alone were attacked, or, at least, to a great extent. Twenty-six of the eighty-six occurred among soldiers alone; six among soldiers and civilians. These records were better kept than the average epidemic reports.

In some instances these epidemics assumed a remarkable dimension. For example, during the first year of the Civil War 10,929 cases were reported with forty deaths. In the Franco-Prussian war 24 per cent of the first. Bavarian Division were afflicted from February to May. Only seven of the eighty-six epidemics were severe and accompanied with many deaths.

Nothnagel also reports an epidemic in Bremen after re-vaccination. Two hundred workmen of a manufacturing establishment out of a total of 1500 became very much jaundiced in the course of four months.

Nicalaisen reports an epidemic in a portion of Christiana. Of the eighty-four cases in which the facts were determined fifty occurred among children and thirty-four in adults.

Out of the 200 cases reported in Talladega only twenty-five were children and eight of these were infants or icterus neonetorum. The blood of the latter was examined and found to contain malarial plasmodium. Thirty of the cases reported were among women. The other 145 occurred among men of previously good health. Fifty of the cases were among negroes. There were probably many more cases in this race that passed unnoticed. Almost all of the cases collected were among the well fed, well clothed and well housed classes.

The cases among children were, with the exception of the babies, entirely among boys. Not a single girl was reported as having jaundice. These boys were about ten to twelve years of age, well developed and previously healthy lads. They were not so severely taxed as the adults

in either length or intensity, although in the beginning the febrile stage was almost the same.

The men affected, as a rule, continued at their usual occupations after the first three or four days, or after the febrile stage had passed off. There were a few cases during the winter months which were more severe and lasted for a longer time, because most of these patients were in doors most of the time on account of the very severe weather and did not get sufficient fresh air and sunshine.

On examination of those patients who came under my care, I found the liver in most cases very slightly, if at all, enlarged. There was tenderness on palpation over this organ as well as over the gall bladder. The spleen was in most cases found to be enlarged after the attack had been in progress for a few days, but it was not so in the beginning.

I failed to find malarial plasmodium in the blood of those cases in which I made an examination of the blood. There was one exception—a patient, who had previously had an attack of malaria, from which he had not entirely recovered.

I learned from the other physicians that they found malaria in those cases in which a blood examination was made; and quite a number gave that as the main factor in the causation of the epidemic. One physician told me it was his opinion that it was due to inferior whiskey, or, as he expressed it, "mean liquor," that was sold at that season. Some agreed with me that the water (supply) was the main cause of the epidemic in Talladega.

In looking up the causes given by writers on this subject, I find that very few give malaria as the predisposing cause. One writer makes the following statement: "Error in diet, poor, inappropriate food, a monotonous diet, bad drinking water, swallowing impure river water during bathing, and breathing of polluted air." Another says: "The infection commonly comes from polluted water and is often associated with malaria, diarrhoea infection and typhoid fever. Some writers believe it possible for jaundice to spread by direct contagion. But not a single case of the Talladega epidemic could be attributed to the latter cause. Nothnagel puts the different causes into three classes:

1. Atmospheric, telluric, or climatic causes.
2. Dietetic influences.
3. Infectious causes.

He further adds (that) "It is probable that a combination of all of these factors often is present. For example, the first two may predispose the patient to the influence of the third."

The spring and early summer of 1907 were exceptionally disagreeable, the temperature being very changeable. Besides, there was much rain, making it almost impossible to keep the city in perfect sanitary condition, showing that the first class of causes (given by Nothnagel) were present. The diet, or second class, played a very small part if any in the causation of the epidemic, as most of the cases were well provided with a variety of wholesome food.

The third, or infectious, according to my theory played the leading part in the causation, or I might say that judging from the observation and study of the health record of Talladega I came to the conclusion that it was the main predisposing cause.

Referring back to the health of Talladega in the spring of 1905 and 1906 you will find there was quite an epidemic of diarrhoea, which was agreed by both the profession and laity to be due to bad drinking water, because those using cistern water were not affected. In 1907 this annoyance was not so bad, but constipation prevailed instead. Constipation, being one of the common afflictions of the people of the present day, opposed nature in trying to throw off or get rid of the poison or infection in the upper bowel, where tht infection caused an irritation and eventually lead to jaundice. The bacteria after they entered the intestine probably penetrated the bile duct and caused inflammatory reaction leading to jaundice. There is another theory that all of the symptoms are produced by intoxication with ptomaines elaborated by the bacteria in the intestines, and then absorbed.

Talladega being one of the oldest towns in the State, the foundation or ground has become satuated with impurities for a generation or more, making the well and spring waters very unsanitary because they are partially supplied by the rain water which percolates through and finally reaches the veins which supply these wells or springs which are still being used by some. An analysis was made of these waters in 1906, but not enough impurities or nitrogenous matter was found to pronounce them unsanitary. Besides the nitrogenous or vegetable matter, these waters contain an abundance of lime salts, mostly calcium car-

bonate, which probably helps cause an irritation in the stomach and duodenum.

The majority of the cases of jaundice appeared gradually with headache, malaise, drowsiness, abdominal pain and cramps in legs and subsequently usually vomiting; moderate temperature, (although in some the temperature went as high as 104 degrees); chill and chillness. Jaundice came on several days after the appearance of first symptoms. Generally by this time the temperature was normal and where there was no complications it did not rise again. In some the temperature at this time became subnormal and remained there for some time. The patients usually had a very slow pulse, with putty colored stools, highly colored urine and sweat, and other symptoms seen in catarrhal jaundice. These cases usually lasted from two to eight weeks. There were very few complications. Two cases were taken with biliary colic and after the acute symptoms had subsided became jaundiced. Another was a case of a boy with pneumonia. In another a woman just before confinement became very much jaundiced. The child was still-born and the mother died in a few days. These last two were the only two cases reported that terminated fatally.

## Infection of the Prostate.*

*By A. F. Toole, M. D.*

*Birmingham, Ala.*

There are certain factors which govern largely the liability of any organ to infection. Foremost, perhaps, are the following: (1) Vascular supply; arterial, venous and lymphatic; (2) exposure to direct invasion; i. e., contiguity to or continuity with other and infected parts; (3) anatomic structure, and (4) bio-chemical properties, covering the presence of a secretion or of an inherent immunity unfavorable to germ growth. It is well to consider in what way these factors regulate prostatic infection.

First, as to the vascular supply. The prostate receives arterial blood through branches of the internal pudic, the inferior vesical, and the

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middle hemorrhoidal arteries; sources certainly rich in theoretical chances of metastatic infection, although we could seldom if ever prove invasion through these channels. The venous return from the substance of the prostate enters the plexus of Santorini as it lies between the capsule and the sheath of the prostate, this plexus in its formation receiving blood from the dorsal vein of the penis. Somewhat further on, about the base of the bladder, into what is sometimes designated as the vesico-prostatic plexus, there empty certain veinlets coming from the cellular tissue around the rectum. Moreover, situated just beneath the mucosa of the anterior or superior wall of the prostatic urethra, as described by Taylor, there is a smaller plexus of veins. From the foregoing arrangement, other possibilities for infection can easily be deduced. Of perhaps greater importance, however, is the opportunity, or rather necessity, for frequent and extreme congestion, afforded by such free arterial and venous supply. Lymphatic channels arise in the substance of the prostate, and around its base are to be found numerous lymphatic glands. It is again not as clear as it might be just what part the lymphatics play in distributing infections through this region; most probably though, such part is under-estimated.

We next come to the exposure of the organ to direct invasion. Except in the rare occurrence of a wound through the rectum, or of a deep ulcer of the rectal wall, organisms do not directly reach the gland from its outer surface; such infections practically speaking always extend to it through the prostatic urethra by which it is tunneled; either travelling in an outward direction from bladder, ureter, or kidney, or backward from the anterior urethra. It can also be infected, or reinfected, through the ejaculatory ducts, from diseased seminal vesicles or lower urogenital tract. I am convinced that a prostatic inflammation is often reproduced or at least rendered active and acute through a belated entrance of germs from the epididymis or seminal, vesicles.

The anatomic structure of the organ favors infection in the following respects. It is aptly termed a gland, in spite of widely varying estimates as to its glandular and muscular composition, for its glandular functions far out-balance its muscular. Conceive then, a gland made up of a large number of fairly well-defined lobules, in which, to use one description, are "wavy, convoluted branched tubes, which terminate in

saccular blind extremities;" conceive these lobules as emptying upward through ducts which are devoid of muscular fibres in their walls, and emptying into a pouched cavity wherin collects the product of any surface inflammation, and we certainly have a structural arrangement calculated to invite infection.

Whether invading organisms are in any way influenced by the nature of the glandular secretion of the prostate, is a matter for conjecture. According to Lohnstein's investigations in diseased prostates, the secretion is usually acid; according to Stern, whose studies are to many more convincing, the normal secretion is alkaline. Thus the glandular tubules might afford a favorable culture medium to some bacteria, an unfavorable one to others. There is another question however under this heading, which deserves some mention. It is commonly accepted that wounds of the rectum, vagina and even penis, heal with a surprising ease, considering the innumerable organisms present; this fact has been accounted for on the ground of an immunity acquired through countless generations; some such property might likewise inhere in the prostate, through its nearness to the rectal cess-pool. Some explanation of this kind seems necessary in off-setting the other factors favorable to infection, otherwise we should expect to see the prostate infected far more frequently and with far greater virulence.

## INFECTIONS CLASSED ACCORDING TO CAUSE.

While we might then conceive of almost any pathogenic germ as the infecting agent, we know that clinically but very few organisms are met with, and that of these, one, viz., the gonococcus, holds almost a monopoly. There are various reasons for such findings; streptococci and staphlococci, for instance, don't seem to flourish as surface growths along the urogenital tract, and where they might exist to the extent of being borne thither by metastasis, the local infection would be submerged in the general septicemia. In wounds of the prostate we do meet with a localized inflammation which at first overshadows the rest, but which soon emphasizes the vascularity of the organ by phlebitis, thrombosis, and pyemia. Again, we often have a neighboring infection with bacillus typhosus and bacillus coli communis; just why we do not more often have a prostatitis recognizable as due to these organisms is not altogether evident; personally I believe that these bacilli are often in the

prostate, but are overlooked because of the absence of most phenomena of inflammation such as pus, pain, and temperature; or because perhaps of the inherent immunity already suggested.

Excluding these possibilities above-mentioned, then, we have of the large majority left, the tubercle bacillus as the causative factor in a few, and the gonococcus in the remainder. The numerical strength of gonococcal infections is due both to a suitable habitat being here acorded to this germ, and also of course to the lamentable frequency of an infection starting in the anterior urethra and commonly termed gonorrhoea.

## PATHOLOGY.

Taking merely the gross pathology of prostatitis, we are concerned first with its varieties as decided by the anatomy of the organ.

Most simple in degrée would be a mere prostatic urethritis; an inflammation, remember, of the mucosa of the deep urethra, with even the glandular ducts meanwhile escaping. It is impossible to deny that such a state of affairs might exist, but it is equally easy to claim, and far more probable, that every posterior urethritis invades some or all of the ducts for a certain distance; such an assumption appears to be more legitimate, considering the structure of the organ, and might easily modify both our prognosis and treatment.

Before considering the gland itself, we should take note of periprostatitis, as an entity undoubtedly found, and not so very rarely. Its origin is often in a primary prostatitis, but it may arise independently; its symptoms and treatment are somewhat different from those of prostatitis, as we shall see.

Of inflammations of the gland itself, we have two main varieties; localized invasion, called prostatic folliculitis, follicular abscess, and which it seems would be more aptly called a lobular prostatitis,—and a general invasion, called parenchymatous prostatitis, general prostatitis, or if so far advanced, prostatic abscess. The first variety might be likened to infection of the tonsillar crypts; the latter to a tonsillar phlegmon. The first, and by far the most frequent form, follows a deep invasion of duct and tubule, from some urethral infection; its clinical importance lies in the fact, that once infected, a single lobule may remain infected, liable to escape detection, but a focus full of future possibilities. The second form, a general prostatitis, is far less frequent,

but is even then frequently overlooked. It is the form which infection through the blood or lymph is most apt to produce, or it may follow the bursting and rapid extension of a lobular inflammation. In lesions of the first type we have the blocking of a duct and a cystic or pseudo-abscess; in those of the latter type, an infection of glandular, muscular and connective tissue. Needless to say, two or more of these forms may and generally do co-exist in the more chronic types of infection, such as the tuberculous.

Again, although slightly astray from the title, it is due to be noted here that in almost any form of infection above given, the prostatic adnexia,—ejaculatory ducts, seminal vesicles, vasadeferentia,—are necessarily exposed to the same pathologic process.

After considering the forms which may be assumed by an inflammation, we come naturally to the results produced. For immediate results we have, aside from those exhibited more clearly as symptoms a disturbed or arrested physiology. The chief function of the normal gland seems in our present light to be sexual; the elaboration of a secretion which is necessary in rendering the secretion of the testicles potent for reproduction. Perhaps if only a small portion of the glandular substance remains unaffected, or recovers entirely, this function is preserved. The results of a general involvement, however, may prove to be very serious in this respect. We too often meet with cases of sterility where the only break in the reproductive cycle seems to be a lack of prostatic fluid. Experimentally, certain alkaline solutions, as of sodium carbonate, have given hopes of overcoming this deficiency, and a further study of the normal prostatic fluid is worthy of effort, along the lines of our newer physiological chemistry. Sequelae such as the above affect the family and the race; we may next consider one from which the individual is the sufferer.

Prostatic hypertrophy was long ago attributed to earlier inflammations; then arose a theory finding its etiology in a sort of compensatory overgrowth, giving to the prostate an important role as a urinary organ. With a backward swing, many investigators found evidence under the microscope that all forms of hypertrophy of this organ could originate in an infection. Deaver admits the plausibility of the reasoning, and the facts on which it is based, but desires corroboration from more complete clinical records; Greene started out to prove a neoplastic

theory, and was led to conclude fully with the exhaustive work of Ciechanowsky, who holds that "the most frequent cause of prostatic hypertrophy is a primary posterior urethritis, usually of gonorrhoeal origin."

## SYMPTOMS.

Except for a few comments, I shall be brief as to symptoms. Subjectively, the chief ones are pain, malaise, and neurasthenia, or more exactly those varied and varying sensations which are recognized as coming from a neurasthenic mind. Pain and discomfort are regulated more by the localization of infection than by its degree; a small lobular abscess, partially blocking the urinary outflow, or a periprostatitis extending beneath the vesical neck, will cause as a rule far more distress than a general prostatitis of medium severity. The malaise, anorexia, and even loss of weight often seen in a patient suffering from sub-acute prostatitis, are all out of proportion to the condition present.

The neurasthenia too often accompanying or following prolonged prostatic infection is an old story, and one which is trying enough to be almost reflected in the mind of the medical man into whose ears are forced these endless tales of woe. Although sexual neurasthenia may arise from partial impotence, from varicocele, and even from pediculosis, I have often wondered at the degree of hypochondria shown in cases where the existence of a prostatitis was not even suspected.

Space allows but the briefest considerations of objective symptoms, some of which are marked by considerable irregularity, while others are constant but not easily evident. Pulse and temperature are especially unreliable, and may also show a lack of their usual correlation. The inflammation may even attain the grade of a large prostatic abscess, while the temperature remains practically normal; a phenomenon worth remembering. The leucocyte count is, I believe, far more reliable; in addition, it is of value in determining the prognosis and the indication for operation, in cases of severity. Rectal examination is, of course, a diagnositic measure never to be omitted, and yet its findings are to be interpreted quite warily. A small prostate is by no means necessarily a healthy prostate; and periglandular thickening, cystic ampullae, or rectal conditions may lead into error. A trained finger will gain more perhaps, from the consistency of the organ than from its size. The discomfort occasioned by the examination of any prostate is not to be confounded with true pain, which when found to a degree not war-

ranted by the other symptoms, should at least bring tuberculosis under suspicion. In such cases, and in all cases giving acute symptoms we must forego the most conclusive measure, that of massaging the gland and noting the result therefrom. By this means we can make plain the diagnosis of a large percentage of cases whose nature would otherwise be undetermined. Lastly, a careful study of the urine would make or confirm our diagnosis in these more obscure cases, if this study be carried through with the proper attention to detail. I would like to say more here of the utter fallaciousness of entirely too many casual urinary examinations; a little urine in one glass, perhaps some in a second, a hasty glance, and an instant conviction or acquittal of the prostate—such is too often the procedure.

The course and prognosis have already been touched upon here and there in the foregoing. If the invading organisms be these commonly called pyogenic, and especially if these gain entrance through traumatism, the possibilities of sepsis are great; local abscess, pelvic cellulitis, thrombosis, and septicemia may supervene. If the tubercle bacillus be present, the ultimate prognosis is likewise very bad, and a spread of the infection certain. If the gonococcus has implanted itself, the prognosis embraces the whole scale of lesions, from a transient urethritis to septicemia and death. Concisely estimated, however, the average case of gonorrhoeal prostatitis will recover and become free of gonococci in time; perhaps spontaneously, and almost certainly when properly treated. The pessimistic conclusions derived by some from post-mortem findings show a commendable amount of work, but do not accord with a far greater amount of clinical observation. I believe the prognosis is far more dependent upon the danger of the infection extending to the adnexa than to a prostatitis per se; that a patient with infected seminal vesicles is in a worse fix than one with a moderate severe prostatitis, —always in the event, of course, of adequate treatment, lasting for weeks or months.

## TREATMENT.

The general treatment of prostatitis needs to be guarded on either side by the following considerations: On the one side, ultra-conservatism or lack of treatment is wrong, because based on the many cases which recover, at least apparently, with no definite measures employed, and because those other cases are not taken into account, wherein grave

sequelae could be rightfully traced back to a neglected infection. At the other extreme, serious wrong is done when a prostatitis is too hastily attacked with the knife; the operation is simple, the immediate result may be prompt and satisfactory, but there is danger of much functional disturbance later. It has been often enough shown that severe prostatic infections with indications which would ordinarily point toward free incision, may slowly recover under the employment of less vigorous means. If I might be allowed a brief criticism of the treatment as too frequently applied, I would say that a few bladder irrigations, a few boxes of santal-oil pills, and an unwarranted faith in the germicidal action of time, are served out to the unfortunate majority, while the less fortunate minority may get a caustic through the endoscope or a knife through the perineum.

But our resources for treatment are really numerous and efficient, when we base our efforts clearly upon the infecting agent and the inflammatory condition. Each separate case demands some variation in drug, or strength of drug, or manner of application, as well as some additional procedure; a purely general synopsis of treatment is therefore all that can be given here. For the milder grades, with symptoms chiefly urethral, we need localized applications, as through the rubber catheter; soothing in tubercular or highly irritable cases, germicidal in others, stimulant in a few. The germicidal and comparatively non-irritant properties possessed by some of the newer silver compounds, make them even more valuable here than in anterior urethritis. In the case of certain so-called non-specific infections, blenorrhagics and urinary antiseptics may help in keeping the bladder or ureters free from invasion, but I must doubt any curative powers as to the prostatic focus.

Where deeper glandular involvement is more evident, complete rest of every kind is to be obtained if practicable; local treatment is to be given or withheld according to case; and later, massage employed until there is demonstrated the return of the glandular function to normal.

In the severe types of general prostatitis, rest is imperative; urethral treatment must be omitted; low diet is good, catharsis is better; rectal irrigations of cold water, and suppositories of opium and belladonna are often of great benefit; if the condition goes no further, the prostate

will later need much attention; in the event, however, of symptoms growing progressively worse, we must carefully watch for abscess-formation; and in determining whether we need to give surgical drainage, temperature, pain, and mere enlargement are less reliable than the leucocyte count, the direction of enlargement, and the detection of undoubted fluctuation. Should drainage become necessary, it is highly important to establish the same in a manner producing the minimum amount of damage upon neighboring structures.

Finally, and regardless of the infection with which we are dealing, there is no condition known wherein patience and minute attention to detail can result in more far-reaching benefit, not only to the individual, but perhaps to an innocent partner and to race reproduction.

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## Treatment of Deep Seated Gonorrheal Infections with Gonococcic Vaccines.*

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The really serious ills of life are the various localized bacterial infections which sooner or later fasten on every man, never afterwards releasing their hold.—*Wright.*

With the steady progress of medical science in the last few years, new methods of diagnosis and of treatment are being continually evolved Many of these have proven of immense value, not only to the scientists, but to the general practitioner also. Each new method, therefore, should be accorded a thorough trial in order that its value, diagnostically and therapeutically, may be ascertained and its limitation defined. In this field the conservative type of mind is of value, for "by making haste slowly" many exaggerated claims will not be made and many disappointments avoided. The eager haste of many an

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*Read before the Medical Association of the State of Alabama at Montgomery, April, 1908.

exploiter has wrecked a new remedy when a more deliberate consideration would have placed a proper valuation upon it. No cure in medicine is absolute; quinine does not cure every case of malaria, nor mercury every case of syphilis, neither will the bacterial vaccine cure all cases of gonorrhea, nor every patient with cystitis or prostatitis.

On the other hand, the ready condemnation by skeptical scientists of every new method will deprive the general practitioner—who leans on the laboratory worker for guidance—of many valuable additions to his armamentarium, for many years.

The principles underlying all vaccine therapy is, as pointed out by Wright, "the scientific exploitation for therapeutic uses of the protective machinery with which the body is equipped. It is then the object of the bacterial vaccine to set in motion this machinery to its fullest extent." To accomplish this, active stimulation of those agencies which produce the anti-bacterial substances in the blood serum must take place, and through them increase leucocytic activity. In this way the body is protected against bacterial invasion, and when infection has occurred it is more readily overcome.

Among those protective substances in the blood, we have those of bacterial nature, bacterialysins, agglutinins and opsonins. The latter is the only one whose amount can be ascertained at present and the effect upon it of inoculation determined. It is probable, however, that these substances are increased or diminished to about the same extent as the opsonic content of the blood, and their relative amount can probably be estimated.

The bare fact that immunity could be induced or heightened by the use of pathogenic bacteria or their products, had been established and extended from the day of Pasteur's epoch making studies in the bacteriology of infectious diseases; and from Buchner's day it was shown that the blood serum bore an important part in the body's combat against microparasites, while the role of the living body cell was demonstrated by the brilliant Metschnikoff. But figuratively, it remained for Wright to so modify the vaccine Pasteur as to cause in the serum of Buchner a substance which prepares the disease producing microbe for destruction by the phagocyte of Metschnikoff.

The introduction of bacterial vaccines into the body causes: First,

a decrease in the anti-bacterial power of the blood. This is designated by Wright as the "negative phase," and is more or less accentuated and prolonged according to the amount of bacterial poison present in the system. This negative phase may be illustrated on a chart on which the curve will fall below the base line; or in other words, below the normal opsonic index. If a proper dose of vaccine has been injected, no clinical symptoms should be produced, even during the negative phase.

Second, there occurs an increase in the anti-bacterial power of the serum called by Wright the "positive phase," characterized by a corresponding rise above the normal opsonic index. This phase is clinically characterized by general improvement of the patient, depending upon the amount of antibodies produced, and may be maintained by reported injections at proper intervals.

The opsonic index of a serum is our guide as to the amount of circulating opsonin, and this index is more or less accurate according to the method of technic and the experience of the individual. Clinic symptoms, however, must be the guide of the general practitioner, or those who are not skilled in laboratory technic; and these are of great value in regulating the dose of vaccine.

From reports of the meeting of the Association of American Physicians held in Washington, May, 1907: A number of writers regard the control by opsonic index as unnecessary in certain cases and depend upon clinical control, guided by the symptoms of the patient taking great care to have the injections far enough apart and the dose so small that no clinical symptoms are produced connected with the negative phase. The injections to be repeated only when any symptoms of reaction characterizing the so-called "negative phase" has disappeared.

Drs. Cole and Meakin, in a recent article in the Bulletin of the John Hopkins Hospital, stated: "That as to the value of the opsonic index, and as a guide to the administration of vaccine, we are more undecided. It seems hardly advisable that the control of the administration of vaccines by the estimation of the opsonic index should be persisted in. In no case have we seen the administration of gonococcic vaccine do harm." The method of clinical control of the vaccine and doses has been used by Trudeau at Saranac Lake for years in the treat-

ment of tuberculosis. Dr. L. F. Barker, of Baltimore, said that vaccine therapy should not necessarily be coupled with opsonic technique.

The question has been also raised whether or not "autogenous" or personal vaccines are necessary in the practice of vaccine therapy. A number of observers question the necessity of personal vaccines and point out that equally good results are obtained from "stock" vaccines taken from similar affections to the one under treatment. Cole and Meakin state: "It has been held by some writers that certain strains of the gonococcus are endowed with special powers in the production of opsonic immunity. Our experience has been quite to the contrary. The vaccines used by us were prepared from four different strains of gonococcus. In comparing the results obtained, no distinct difference could be demonstrated in the clinical results or effects on the opsonic index when the patient was treated with a vaccine made of his or her organism, or when a different vaccine was used." Ohlmacher reports success with a stock gonococcic vaccine in balanitis, urethritis, double epididymitis, and fistula, sub-acute epididymitis, gonorrheal rheumatism, gleet, ophthalmia, conjunctivitis and vaginitis and states: "It is my conviction that a method of practice with such vast humanitarian possibilities should be brought into the possession of the medical profession without delay. Finally, from what I have already seen, tempered by a rather extensive experience in private and institutional medical work, I am prepared to assert that with the proper artificial autoinoculation we can obtain constitutional and local improvements in many subacute and chronic infections entirely beyond any thing previously possible in medicine. And I am personally assured that in these bacterial inoculations we possess therapeutic agents of a specificity and potency exceeding anything heretofore employed in the treatment of disease except possibly the antitoxin for diphtheria."

The composition of a bacterial suspension is as important in determining the results in a case, as is the composition of various drugs in the effect they produce. The bacterial vaccine consists of the specific organism isolated in pure culture, and, after destruction by heat, suspended in normal salt solution.

The vaccines are prepared as follows: The bacterium is cultivated on a suitable media at 37,5 degrees for the proper length of time, when

a profuse growth is obtained; this is collected in normal salt solution sterilized at 60 degrees C. This amount of heat is sufficient to kill the organism, but not to cause chemical protoplasmic changes. By comparing the number of organisms in the solution with the number of red blood corpusles per cubic millimeter in the normal blood, the strength of the bacterial vaccine is determined. A sufficient amount of this standardized suspension is then added to sterile salt solution in such quantity as to give proper concentration. This is then standardized by calculating the total number of killed bacteria per c. c., and hermetically sealing the vaccine thus prepared in aseptic sterilized vials, each vial containing 50,000,000 killed bacteria, the average maximum dose; lesser or greater doses may be secured by calculating that each minim contains one-sixteenth part of the total number of killed bacteria in each package.

Wright says, "That the proper principle of dosage in any series of injections is never to advance to a larger dose until it has been ascertained that the dose which is being employed is too small to evoke an adequate immunizing response." The amount of vaccine required to increase the lowered standard of resistance or to produce artificial immunity varies according to the age, personal character of the patient. The type of the infection, its duration, extent and severity, are all important factors in determining the amount of vaccine to be given. The size of the dose and the interval between injections depend upon the condition of the patient. The study of the ebb and flow of the opsonic tide shows that the wave of increased resistance lasts about three to four days, and to prevent the succeeding ebb the dose must be repeated. Repeat the injection only when any aggravation of symptoms coincident with the "negative phase" (malaise, temperature, aggravation of local symptoms, etc.) has ceased; this usually occurs within three to seven days.

In the treatment of deep seated gonorrheal infections, by the administration of gonococcic vaccine, where there is only a slight discharge throughout the day or in the morning, with threads in the urine, you will notice after giving an injection of the vaccine that in two or three days there will be an increase in the amount of discharge. The urine will become cloudy and contain shreds. This condition will

last for several days, when the urine will clear up, shreds become less and the discharge will become thin and watery, also less in amount. Repeat the dose of vaccine, increasing the number of killed bacteria, according to the effect of the last dose and the condition of the patient.

By this method of closely following the clinical symptoms there may occur an inactive or negative phase, as shown by such symptoms as light chill, rise of temperature, malaise, aggravation of local symptoms, pain and soreness in the prostate gland, increased amount of discharge, with the urine very cloudy and full of shreds. Then omit the vaccines for a few days, say four or five days, until the above symptoms subside; and then return to one-half of the offending dose and work up again. The point of injection of vaccine is considered by Wright and others to be an important factor in the success of vaccine therapy. Wright recommends that the injections of the vaccines should be made as near the point of infection as possible. At the same time, the injections should be made in regions where lymph and blood supply will secure rapid absorption. I have found from clinical experience that, in making these injections, I meet with better success when I give them in the inguinal regions. And I never inject more than 100 million killed bacteria, which is in a salt solution of 2 cc, for I have found that larger doses than that given in one place will cause great pain and suffering. Otherwise, there is very little pain attending the administration of the vaccines. When I give very large doses, after injecting about 100 killed bacteria in each inguinal region, I then use either the gluteal or lumbar regions for making any other injections.

In the administration of the gonococcic vaccine my technique is as follows: Using an all glass 2 cc Luer syringe, with a small needle, which is thoroughly sterilized by boiilng, I clean the point where I intended making the injection by shaving, washing with tr. green soap and alcohol. I then determine upon the size of dose to be given and inject deep into the tissue. Then apply a small piece of adhesive plaster closing the point of injection. As the bacterial vaccines are suspensions and not solutions of the bacteria, there is a tendency for the killed bacteria to settle to the bottom of the container upon standing. Care should be taken to shake the vial thoroughly before transferring the contents to the syringe.

Recently Drs. Butler and Long of Chicago, Journal American Medical Association, reported some very favorable and brilliant results with the use of the gonococcic vaccine in the treatment of vulvovaginititis in children. The children were from eighteen months to ten years old.

Drs. Cole and Meakin (Bulletin of the John Hopkins Hospital) reports fifteen cases of gonorrheal arthritis treated with bacteria vaccines. They concluded as follows: On the whole our impression is that the vaccine treatment as carried out has been of distinct value, though we realize that it would require many more treatments to make this conclusive. They have been sufficient, however, to justify us in continuing. Those who expect brilliant results or immediate cures following one or two doses of vaccine will be disappointed.

Dr. Osler's Modern Medicine, vol. III, contains an article by Dr. Cole of John Hopkins Hospital, that refers to the above articles in the treatment of gonorrheal arthritis by gonococcic vaccines.

Dr. Ludvig Kektoen and Edwin O. Hardan (Journal of Infectious Diseases) have treated a number of cases of vulvovaginititis in children with very good results and highly recommended its use.

The Therapeutic Gazette for April, 1908, contains a very interesting and instructive article by Dr. Abraham Perez-Miro, of the Havana Faculty of Medicine, Havana, Cuba. He reports six cases of gonorrheal arthritis treated with antigonococcic serum. He obtained very good results with its use.

I have treated twenty-one cases with bacterial vaccines. I have had ten recoveries, and the remaining eleven cases are still under treatment; all of which, with the exception of two, are showing marked signs of improvement. Now, four of these cases that are being treated with the bacterial vaccines have received only two or three injections of the vaccine; consequently the time is too short to state positively what the results will be.

In the four cases that I will report in detail, when I state that they are cured, I am thoroughly satisfied that they are. For, before I dismiss a patient as cured he must be entirely free from discharge during the day, or even the morning drop for several weeks. His first urine that he voids in the morning must be free from shreds, which I have him bring to me about three or four times a week. I then have him

report to my office with his bowels and bladder empty and I fill his bladder with a saturated solution of boric acid. I examine his prostate gland, through the rectum, if I find it normal without any tenderness, soreness, and induration I have him void the boric acid solution in a test glass and allow it to settle, centrifugalizing the lower part of the solution I take the sediment from the centrifugal tube and examine it for pus cells and gonococci; if, after several examinations, I am unable to find any I discharge him as cured.

Case 1. P. White, male, married, age 25. In January, 1902, contracted acute gonorrhea, which in a few weeks was complicated with cystitis and double epididymitis. He received the usual treatment with permanganate of potassium for about eleven months. He was then discharged entirely well, he was not troubled at all for about two years; spring of 1904, when he was either re-infected from his original infection, or a new infection, he does not remember. This time his condi- was treated for this condition in the usual way, with irrigations of tion became complicated with a stricture of the posterior urethra. He solutions of permanganate of potassium and dilation with urethral sounds. This treatment was continued for about two or three months, when he was dismissed again as entirely well. He has not had any discharge, soreness or trouble whatever from the time when he was dismissed as well in 1904 until 1906, when he married. He claims that he has never had the slightest pain, inconvenience or discharge, and he was engaged at the hardest kind of manual labor. He also took the most violent exercise, without any bad results or discharge. His wife has never been pregnant, nor has she suffered from any vaginal discharge, pain or soreness. On March 1, 1908, he was caught in the rain returning to his office, where he remained all day with his damp clothing on. The following night he noticed frequent desire to urinate which was painful, something he had never been bothered with since 1902, when he had the first case of gonorrhoea. The next morning he suffered considerably on voiding his urine, which was very painful and quite frequent. This condition lasted all day, gradually getting worse, until the next day when he passed blood at the end of the act of urinating. He consulted me that evening, and I found his urine full of pus, which I examined microscopically and found gonococci present. There was some blood in the urine, and he suffered a great deal on passing

his urine, which was very frequent and only a small amount. There was considerable hemorrhage at the termination of the act of urination. I advised the usual urinary antiseptics, hot rectal irrigations, and irrigated the bladder with hot saturated solution of boric acid. This line of treatment failed to give him any relief. The next day I kept up the same line of treatment with the addition of rectal suppositories of powd. opium and ext. belladonna every four hours. This treatment was continued for several days and he did not improve at all. There was no discharge from the meatus and never has been any, showing that the infection came from the posterior and not from the anterior. And there was never any soreness in the anterior urethra. I examined the prostate gland and found it very much enlarged, painful and indurated. The epididymis of both testicles was sore, enlarged and indurated. Pain was only present on pressure.

On March 7, 1908, I gave him 25 million killed bacteria, which was injected in the left inguinal region. That night he was not troubled about getting up to pass his water as often as the night before. The next day, March 8, the amount of blood was less, also the amount of pus was less and did not contain as many gonococci as the first examination showed. On March 9 the hemorrhage had entirely checked, very little pain on passing his urine, and the urine contained less amount of pus. Each day his urine became clearer and with less pain and desire to urinate. I then discontinued the rectal suppositories, but kept up the irrigations of his bladder with hot boric acid solution, and the rectal irrigation of hot water night and morning, also the internal administration of urinary antiseptics. On March 11, I gave him another injection of 50 million killed bacteria, in the right inguinal region. The next day his urine contained more pus and was thick and cloudy. He complained of slight pain and soreness in his prostate gland, but there was no pain in voiding his urine. His urine contained pus and shreds for two days, when it began to clear up. On March 16 urine was almost clear but for a few heavy shreds. March 16 I gave him an injection of 100 million killed bacteria, which produced a slight reaction the next day and his urine contained a few shreds, no pus or blood. His urine continued this way for several days, when it began to get clearer with less shreds in it, until on March 21, when his urine,

the first passed in the morning, was perfectly clear and did not contain any shreds. On the evening of March 21, five days following the last injection I gave him an injection of 150 million killed bacteria, which did not produce any reaction at all. He was absolutely free from pain at all times. His urine did not contain any shreds, pus or blood. He reported to my office every day, and I examined his urine, which was normal in every respect. On March 25 four days following the last injection, I injected 200 million killed bacteria, which did not produce any reaction, his urine remaining normal, being entirely free of shreds, and he was not complaining of any pain, soreness or trouble at all. On March 31 I gave him the last injection, which was 250 million killed bacteria, and from which there was no reaction. His urine was perfectly normal. My reason for giving him the last three injections was to see if there would be any reaction, which there would have been if any gonococci were remaining in the tissues.

I am more than entirely satisfied that he is entirely well and free from gonococci. I did not administer any tonic to build up his system, for I preferred him to remain in a state of lowered vitality so I could demonstrate the efficiency of the vaccine.

I may mention in this connection that I used irrigations of boric acid twice daily throughout the entire treatment.

The points of most interest in this case are, the immediate response I obtained from the use of the vaccine in relieving him of the most painful symptoms and conditions, and the fact that these gonococci had laid dormant in the prostate gland for over two years, while getting the body wet and keeping his damp clothing on was sufficient cause to lower his vitality and resisting power to such a low degree that the old trouble was brought to light. I have examined carefully his prostate gland and found it free from pain, soreness and tenderness. I have carried out my usual tests, as described above, and have been unable to find either pus cells or gonococci present. The soreness and induration of the epididymis have entirely been relieved and the induration absorbed.

Case 2. White, machinist, married, male, age 26. In 1904 contracted acute gonorrhoea and took the usual treatment for it, which was a prescription of an astringent nature to be used with a small

syringe. He used this for about five months, when his condition became complicated with gonorrhoeal rheumatism, and he was confined to his bed at St. Vincent's Hospital for about five months. When he got out he was compelled to use crutches for two months to get around. He was then dismissed as well by his attending physician. He never noticed any trouble or discharge for about one year. When he began drinking, dissipating and doing heavy work his discharge returned, and was complicated with double epididymitis, following the injection of argyrol, 20 per cent. solution. He was confined to his bed for about ten days, when he was relieved of the epididymitis, but this complication of the testicle would recur off and on, whenever he strained or lifted any heavy weight. This recurrence lasted for about eight months, when he was discharged the second time as entirely well and cured.

He states positively that he never did receive, as far as he knows, a second infection, as he confined his intercourse to his home, always using a condrum, and has never laid himself liable to contract any infection. About three months ago he consulted me, having been discharged from the last physician in July, 1907, as well. Upon examination I found a watery discharge that was very slight during the day and did not show any gonococci present by microscopical examination. He stated to me that he had a large morning drop, which I had him bring to me on a slide, but was unable to find the gonococci. He was suffering with gonorrheal rheumatism of the right knee and ankle, both joints being somewhat painful and swollen. The epididymitis of both testicles were very much enlarged, painful and indurated. His prostate gland, very tender, painful enlarged and indurated. He told me that he had always suffered more or less with pains in his prostate gland since the first trouble. He has been troubled more or less all the time since he was at the hospital with rheumatism, sometimes being confined to his bed for several days.

On January 27th I gave him 50 million killed bacteria. January 30th the epididymitis was much improved, no pain, except on pressure. Slight pain in right ankle. No pain at all in right knee.

February 4th 100 million killed bacteria injected in right inguinal region, no reaction at all in the way of discharge, or shreds and cloudiness of urine. Knee, ankle and epididymitis greatly improved. No pain in epididymitis and knee, very slight pain in ankle in walking, however, he is able to walk without aid of cane.

February 10th 150 million killed bacteria given in left inguinal region. February 12th reaction produced slight discharge that contained gonococci, as shown by the microscopical examination, which were intracellular. He did not suffer from any pain in ankle, knee or epididymitis. Swelling of ankle and knee joints was absolutely gone.

February 16th 200 million killed bacteria given in two injections, 100 million in each inguinal region. This injection did not produce any reaction whatever, no discharge, shreds or pus in urine. Urine perfectly normal. No pain in knee, ankle or epididymitis. The soreness and induration of the epididymitis was entirely relieved and the size reduced. He did not have any pain in his prostate gland.

February 22d 250 million killed bacteria injected in right and left inguinal regions, which were negative in reaction.

February 27th urine clear and free from shreds. No morning drop or slight moisture at the meatus. Prostate, knee, ankle and epididymitis absolutely free from pain. I then filled his bladder with boric acid solution and made my usual test, before discharging my patient, which was negative. I discharged him as well, and he has resumed his occupation as machinist. I have seen him on an average of three times a week since I discharged him and he has not had the slightest recurrence of his old trouble in any way.

Case 3. S. C. W., machinist, widower, age 32. In 1897 contracted acute gonorrhea and was treated at his home town for about two years, using the usual prescriptions and syringe that are given for these conditions, without any beneficial results. His discharge continued all the time. He then moved to Birmingham and received treatment for three years from three physicians. This treatment consisted mostly of irrigations with permanganate of potassium solutions, instillations of nitrate of silver solutions and the passing of urethral sounds. During the course of treatment his condition became complicated with several urethral or follicular abscesses, which were incised and drained externally. But in healing about one and one-quarter of the floor of the anterior urethra was destroyed and has never been repaired. About five years ago his discharge checked entirely, but his urine contained shreds, and he was discharged as well. In March, 1903, he married and is the father of two healthy children, his wife having died eighteen months ago with meningitis.

About one year ago he noticed a very profuse discharge following intercourse. He used a condrum. He at once consulted one of the leading physicians in this city, who placed him upon treatment of urethral injection and hand syringe, which he had used continuously until he consulted me in January, 1908. I found him troubled with a watery discharge that contained the gonococci, present in large numbers, as shown by the microscope. He stated to me that he had suffered from constipation for the last ten or twelve months. The prostate was enlarged, sore and tender to the touch, and slightly indurated. The epididymitis of the left testicle was enlarged, indurated and painful. He informed me that about nine months ago his condition was complicated with epididymitis of the left testicle and he was confined to his bed for about ten days or two weeks. Upon endoscopic examination I noticed a number of urethral fistulas which were discharging pus. The fistula tracks of the upper part of the exposed urethra were discharging pus. He told me that these fistulas had given him a considerable amount of pain and trouble. That after they were cauterized they would check up and no discharge would come from them, but were always painful. Then they would rupture, discharging pus, and this rupturing would relieve the pain. I treated him with vibratory messages of prostate gland, irrigations of carbolic acid solutions and instillations of a solution of argyrol, but with very little beneficial results. He still had a profuse discharge which contained the gonococci. Pain in the fistula and prostate gland.

On January 21st I gave him his first injection of 25 million killed bacteria, injected in the left inguinal region. February 4th there was a marked reaction, for his discharge was greatly increased in amount and character. However, there were less gonococci present than last examination before using the vaccine.

February 6th 50 million killed bacteria injected in right inguinal. February 9th discharge less in amount, only slight throughout the day, large morning drop. This condition continued until the 12th when there was no discharge during the day, only slight morning drop, but his urine contained a large amount of shreds and was very cloudy.

February 13th 75 million killed bacteria were given in left inguinal region. This produced a very slight reaction, increasing the discharge

in amount very little, but increasing the shreds in the urine. The microscopical examination showed very few gonococci, which were less in number than at the last examination. This slight discharge checked up entirely in three or four days, but the urine continued to have shreds in it. The fistulae were not painful and were not discharging any pus, nor was there any redness or soreness about them.

February 18th 100 million killed bacteria given in left and right inguinal regions, 50 in each side. Reaction very slight; only slight discharge being produced which was very thin and watery. I am unable to find any gonococci present upon microscopical examination. This condition lasted for about five days, the discharge checking entirely, and the amount of shreds in the urine getting less each day. I now increased the amount of vaccine and lengthened the interval between the time of injections.

On February 25th I gave him 150 million killed bacteria, injecting 75 million in each inguinal region. On February 28th his urine became very cloudy and thick and full of shreds, but there was no discharge. His condition continued to improve, the urine clearing up with only a few shreds in it. There was no discharge following the last injection of vaccine.

March 7th I gave 200 million killed bacteria in the right and left inguinal regions. The reaction was negative, as it did not cause any discharge, or the urine to become cloudy, nor increase the amount of shreds in the urine. The shreds diminished entirely in three or four days. The fistulae have not discharged or caused any pain or soreness since February 9th.

March 18th I gave him 200 million killed bacteria, injecting same into the inguinal region. The reaction was negative, producing no discharge or any shreds in the urine. On March 28th I gave him an injection of 250 million killed bacteria in two injections in the inguinal region. This did not produce any reaction, as there was no discharge nor any shreds in his urine. On April 2nd I had him report to my office with his bowels and bladder emptied; filling his bladder with saturated solution of boric acid I carried out my regular test, which I do before I dismiss a patient, and my examination was negative. Since then I have had him reporting to my office about three times a week,

with samples of the first urine that he passes in the morning. All of these samples of urine, and that which I saw him pass at my office, are normal, entirely free from shreds. There has not been the slightest discomfort in urinating, and the fistulae do not give him any pain or discomfort. They are not discharging and have not since February 9th. You will note that I gave him several large doses of vaccine after he was entirely free from discharge or shreds in his urine, to see what effect the vaccine would have upon him, and which were negative in every respect, going to prove conclusively that after all of the gonococci are eliminated the vaccine will have no effect. I have given very large doses after I was satisfied that he had no remaining gonococci, to see if the large doses would have any bad effect, and found that they did not produce any effect.

Case 4. W. White, male, single, age 31, bookkeeper. Contracted gonorrhea five years ago, and he used patent medicine injections for a few weeks, then he consulted a physician, who prescribed astringent injection to be used with a hand syringe. He left this physician and has been treated by several since. He consulted me about five months ago and was troubled with chronic gonorrhea that involved the anterior, posterior and prostatic urethra. He did not have very much discharge during the day, but a rather large amount in the morning. This discharge was examined microscopically and I found gonococci present in large numbers. I treated him with irrigations of permanganate of potassium, using the usual strength solutions, as recommended. Solutions of argyrol and silver nitrate instilled, as recommended by the leading authorities. The use of the endoscope revealed several ulcerations and granulation in the urethra, which were treated with solutions of copper sulphate and silver nitrate solutions applied through the endoscope direct to the ulcerations and granulations. Upon examining his prostatic gland I found it also involved, which was indurated and tender, which I treated with vibratory massage, through the rectum, intravesicle irrigations of saturated solution of boric acid. I advised the usual urinary antiseptic and internal medication that is recommended in these conditions. The above line of treatment was carried out for about three months, and it seemed to benefit him to some extent. There being no discharge throughout the day or the usual morning drop, still

there was always a hypersecretion or moisture at the meatus in the morning which remained all day. His urine still contained shreds. This condition would not respond to any line of treatment. I made repeated examination, microscopical, of this morning secretion and of the shreds, but was unable to find the gonococci present. I then decided to place him upon vaccine treatment, which was as follows:

January 15th 25 million killed bacteria injected in left inguinal region. On January 18th there was a marked reaction, for there was a profuse watery discharge which contained a large number of gonococci and pus cells, as shown by the microscope. He also complained of soreness of the prostate gland.

January 20th 50 million killed bacteria injected in the right inguinal region. The reaction produced following this injection was that the discharge became less and very watery. The microscope showed a large number of pus cells and epithelium, but a less amount of gonococci than the last examination. On January 24th the discharge was almost checked, except in the morning, when there was a morning drop, which contained a few gonococci and pus cells. But he had very little discharge during the day. On Jan. 25th, 75 million killed bacteria was injected in the left inguinal region. Reaction on January 28th, morning drop very slight, and which contained a few gonococci. No discharge throughout the day. No soreness in the urethra or prostate gland. February 3rd 100 million killed bacteria were injected in the left and right inguinal region. This injection produced very slight reaction, as there was only a slight increase in the discharge, but strange to say, the microscope did not show any gonococci after repeated examinations, but there was a large number of pus cells and epithelial cells. On the morning of February 10th he did not have any discharge, nor was there any discharge during the day. The urethra and prostate gland feeling normal but urine contained shreds. On the evening of February 10th 125 million killed bacteria were injected in the right and left inguinal regions. These injections did not produce any reaction, as there was no discharge and less shreds in the urine. From February 12th until the 16th the urine contained shreds, but there was no discharge, not even the slightest hypersecretion in the meatus in the morning. On February his urine was clear and absolutely free from shreds.

February 18th I gave him 150 million killed bacteria without any reaction whatsoever. There was no discharge, or morning drop, and the urine perfectly clear, free from shreds. No soreness or tenderness of the urethra or prostate gland.

February 25th I examined him thoroughly, carrying out my usual method before dismissing a patient, and my results were negative to my usual tests. The last injection did not produce any reaction, and with his urine clear and free of shreds. I decided to wait and see what would develop. I have seen him on an average of two or three times a week, examining his urine each time, which is still clear and free of shreds. He has not had any discharge, or even the hypersecretion of the meatus in the morning, since February 7th. He has no soreness or uncomfortable feeling of the posterior urethra or prostate.

In closing, I wish to call especial attention to the fact that in treating case 3, which was complicated with gonorrheal rheumatism and epididymitis, I did not use any internal medication. Neither was there any local treatment given. The vaccine was the only treatment given and which certainly did respond most brilliantly to it. He has resumed his occupation as machinist and no trouble from his old condition. On the other three cases I used, locally, irrigation of one per cent solution of carbolic acid, which I found very beneficial in keeping the urethra clean. No antiseptic or astringent used locally. I did not give any internal medication. I have found that the constipation which complicated several of these cases has been entirely relieved.

I have never seen any bad effect from the injection of the vaccine, with the exception of a slight pain at the site of the injection, due to the pressure of the fluid in the tissues. I have given it in doses from 25 million killed bacteria to as large a dose as 500 million killed bacteria; of course, when these large doses are given, as I explained, they should be made in several injections, at the same time, and not try to force over 2 c. c. of vaccine, or 100 million killed bacteria, in one injection.

You can readily see that from the cases I have reported there was no astringent used, and that the vaccine first produced a decided reaction, with a discharge which gradually checked up. In case 2 and 4, I was unable to find the gonococci in the discharge or shreds before I gave the

vaccine, but after giving the vaccine I found the gonococci present, going to prove that if the gonococci are buried in the deeper tissues, the vaccine will cause them to be eliminated. And in discharging our so-called "well cases," it would be a good idea to give them a course of treatment with vaccine to see what reaction would be produced. For in vaccines I believe we have a most valuable agent, but as yet my work has been too limited to give any positive expression upon it; but I shall continue to work upon the lines I have and hope to be able to report some very successful work at a future time.

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## The Surgical Treatment of Gastric and Duodenal Ulcers: With Report of Cases.

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Rydygier in 1881, was the first surgeon to operate for gastric ulcer,

*Read before the Medical Association of the State of Alabama at

he successfully resected a large ulcer of the posterior wall of the stomach.

VanKleef had a case the same year and a year later Czerny also had a successful case.

Doyen in 1893, introduced gastro-enterostomy for this condition, and in 1895 reported a series of cases at the German Congress attributing the relief or cure of the ulcer to the rest induced by the operation.

Peterson, of Heidelberg, did the first no-loop operation in Czerny's clinic in 1900, using a Murphy button.

Dr. Chas. H. Mayo in October, 1903, did the two first no-loop operations with the clamps and suture making a longitudinal incision in the gut.

The Mayos began using the no-loop method as a routine in 1905.

*Age.*—Gastric ulcers are found at all ages from infancy to extreme old age. Bissett reported a case forty-five hours old which perforated. Goodhart had a case thirty hours old. Lister and Spiegelberg report ulcers in children three and four days old. Moynihan reports an ulcer in a child seventeen months old and his oldest case was seventy-three years of age.

*Frequency of Ulcer.*—Heretofore the ratio of ulcers has been placed at about ten gastric to one duodenal, but Mayo in two hundred cases (05-07) found eighty-seven gastric and ninety-eight duodenal and fifteen were independent ulcers of each viscus, showing that they are quite as frequent in the duodenum as in the stomach. He finds that the duodenal ulcers are much more frequent in men, seventy-seven cases to twenty-three in women, but of the gastric ulcer there were fifty-two men to forty-eight women. He finds that 80 per cent of all gastric ulcers are located in the pyloric end.

*Classification.*—Mayo divides ulcers of the stomach and duodenum into two classes:

1. The indurated or calloused ulcer, which can be seen and felt during operation, on account of the scar tissue. He says: "All of the positive advances in surgical knowledge concern this group." He finds that 87 per cent of the duodenal and 70 per cent of the gastric ulcers belong to this class.

2. The non-indurated mucous ulcer which can not be identified from the outside of the stomach or duodenal wall and it is with great difficulty that it can be recognized after the viscus has been opened. He does not consider these operable cases unless there are complications as perforation, hemorrhage or obstruction.

Mayo-Robson and Moynihan also group them under two heads:

1. Erosions as described by Dieulafoy:

(A) Simple erosions, consisting apparently of mere abrasions of the surface epithelium; they may be scarcely perceptible to the naked eye, but in some cases give rise to severe hemorrhage.

(B) Exulcreatio simplex—the surface layers are removed so that the arterioles running under the muscalaris mucosa are exposed. These ulcers may give rise to terrible hemorrhages, providing rapidly fatal unless controlled by treatment.

2. Simple ulcer of which Cruveilheir has described two kinds:

(A) Acute round ulcer which is most frequently found in women, often chlorotic young women, and may be complicated by severe hemorrhage and perforation.

(B) The chronic form, irregular in out line, associated with thickening of the edges and frequently found in men; according to Seymour Taylor 72 per cent males to 28 per cent females. Robson and Moynihan have found them equally as often in women as in men.

*Duodenal Ulcers.*—Moynihan had operated on 114 cases of duodenal ulcer up to 1907 with eleven cases of perforation and in two cases there was an hour-glass stomach. The ulcer was located in the first part of the duodenum in 107 cases and in the second or junction of the first and second in 7.

Collin collected 262 cases, in 242 cases the ulcer was in the first; fourteen in the second; three in the third; and three in the fourth part of the duodenum.

Perry and Shaw collected 149 cases with 123 in the first, sixteen in the second, two in the third and fourth, and in eight cases they were scattered.

Moynihan found gastric ulcers in 40 per cent of his cases and thinks this is the primary condition.

*Etiology.*—Ulcers have been produced experimentally in animals by injuring the mucous membrane of the stomach and producing an anaemia by bleeding.

Silbermann produced haemoglobinuria and found that ulcers formed at the seat of injury of the mucous membrane.

Some consider the excess of hydrochloric acid responsible for the ulcer formation.

Robson and Moynihan consider hyperchlorhydria rather an effect than a cause and when found indicates in their experience, the presence of a gastric or duodenal ulcer, they say "in our experience hyperchlorhydria has never existed without ulcer of the stomach or duodenum or both."

VanIjzeren claims to have produced the various forms of ulcer found in man by dividing the pneumogastric nerves below the diaphraghm in rabbits.

Robson and Moynihan consider them septic in origin and claim that oral sepsis is responsible for a large number of cases and cite the poorer classes who pay little or no attention to their teeth, "mild sepsis leads to gastritis, then to hyperchlorhydria, which in turn provokes and keeps up ulceration."

Mr. Bruce Clarke reports the case of a sailor fifty-five years of age who came under his care in November, 1904, with ulcer of the stomach for which he had been under treatment for six years; just six years before he had been shipwrecked and spent sixteen days in an open boat before he was rescued, he suffered from exposure and had only mouldy, magotty bread to eat and putrid water to drink; two days after being rescued he had violent pains in the abdomen and vomited everything he took for five days; the vomitus was at first yellow and then became black; he has never been well since this time and previous to this he had been in perfect health and could eat anything he wished.

A. Gohn reports four cases due to a pneumococcus; Jenson had three perforating cases due to the same infection and Bruenner found a pneumococcus in four out of twenty-two perforated ulcers.

Dudgeon and Sargent have found a strepto-diplococcus in nine cases.

*Pathology.*—As a rule the acute ulcer is round and has the appearance of being punched out—its walls are not infiltrated and does not usually

show much evidence of granulation. Its general appearance is that of a cone with the base towards the moucous surface. The mucous membrane is normal up to the margins of the ulcer.

The chronic ulcer is often large, irregular in shape, margins hard, indurated and infiltrated and the base shows evidences of cicatricial processes. The peritioneal coat may be thickened and adherent to the liver, pancreas or some other viscus and these in some cases form the floor of the ulcer. The mucous membrane for some distance around the ulcer is thickened and infiltrated.

*Symptoms.*—Mayo-Robson says, "The special symptoms of ulcer of the stomach are pain, vomiting and hematemesis, but I have seen and operated upon quite a number of cases in which pain had not formed a prominent symptom, in which hematemesis had been entirely absent, and vomiting had not come on until stenosis of the pylorus had produced dilatation."

"The pain is usually referred to the epigastrium, whence it may radiate in various directions, though generally it is toward the left subscapular region. Food usually increases the pain and the time of onset after food is frequently indicative of the site of the ulcer. If the ulcer be near the cardia or along the lesser curvature the pain usually comes on immediately or within half an hour of food. If it be at or near the pylorus it may be delayed from an hour to two or three hours after eating, whereas if it be in the duodenum it may not occur until four hours after a meal, and in that case it is almost invariably relieved by food. As digestion is frequently delayed in the evening, pain of this character has a habit of wakening patients at midnight or later, so that in chronic cases a glass of milk will be regularly placed by the bed side in order to relieve the expected discomfort."

"Epigastric tenderness is usually well marked and is frequently associated with rigidity of the recti; it may be strictly localized or widely diffused. A special tender point is often found in the back a little to the left of the spine, opposite the ninth and tenth dorsal vertebrae."

"Vomiting is a frequent symptom of ulcer of the stomach, and as a rule it gives immediate relief by removing the food and the acid contents of the stomach. In some cases vomiting is a very serious symptom, leading to profound inanition and utter inability to take or retain

food; but in others vomiting is not a marked feature of the disease. Although gastrorrhagia is present at one time or another in the greater number of cases, it does not always show itself as hematemesis or melena, and may only be rendered evident by a microscopic examination of the alvine excretions."

*Symptoms of Duodenal Ulcer.*—Moynihan gives the following as the symptoms of duodenal ulcer: After food is taken the patient is free of pain for an hour or two; in from one and a half to four hours after meals an uneasiness is noticed in the upper part of the abdomen—a burning, gnawing sensation develops, with a bitter taste in the mouth; there may be eructations of food or gas, bitter and acid in taste. The pain gradually increases and may be relieved by belching or pressure. As the pain gets worse it may radiate around the right side of the chest or strike through the back to the right of the mid line. Patients discover that taking food will relieve them and often keep a glass of milk or some other food by the bed to be taken during the night. When a meat diet is used there is a longer period of freedom and frequently they will eat a heavy meal of undigestible food for the same purpose. These patients always have a good appetite.

*Treatment.*—All agree that gastric ulcers should have a thorough medical treatment, and, should this fail, then the case should be seen by a surgeon.

Mayo-Robson quotes Leube as saying that one-half or three-fourths of all cases of gastric ulcer will be cured by four or five weeks of medical treatment, but if not cured in that time they will not be cured by medical treatment alone; and says he thoroughly agrees with him in this statement.

Moynihan thinks medical treatment is much less beneficial in duodenal than in gastric ulcers, and considers it a much more serious disease with greater liability to hemorrhage and perforation.

*Indications for Operation.*—Hartmann gives the following as operative indications: Pyloric or medio-gastric stenosis, small repeated hemorrhage, adhesive peritonitis, non complicated ulcer which has not been benefited by medical treatment, and especially if the pyloric syn-

drome be present; and says further that there is no debating the fact that perforation and perigastric abscess are imperative indications for operative treatment.

*Operation.*—The operation of choice is a no-loop gastro-jejunostomy after Mayo's method resecting the ligament of Treitz when abnormally developed as recently suggested by Mayo. In this operation the direction of the jejunum, after the anastomosis with the stomach passes or the left. While visiting Moynihan's clinic in England, soon after Dr. Mayo reported this operation, I had an opportunity to discuss this point with him, he said that he was doing a very short loop operation and allowed the jejunum to point downwards instead of to the left and in a recent paper (Annals Surgery, April, 1908) he still contends that this is superior to Mayo's method in the majority of cases. Excision of the ulcer has been recently advocated by Moynihan also by Gauthier and Riviere who report ten cases and say that excision alone obviates all danger of hemorrhage, pain, perforation and malignant degeneration.

Marchetti claims that ulceration is due to injury of a branch of the vagus, and that treatment should aim at restoring the function of the nerve, i. e., excision of the paralyzed branch.

Mayo says that the saddle ulcer of the lesser curvature, if it does not interfere with drainage, should be excised if practicable. He reports fourteen cases of excision, six of the lesser curvature and eight with pyloroplasty and gastro-duodenostomy, without a death.

Kroenlein, Linossie, Doyen and many other continental surgeons think excision should be done only in exceptional cases.

Pyloroplasty according to Mayo has a very small field of usefulness. It is considered obsolete by many of the German surgeons.

In perforating ulcer, the perforation should be sutured up and if the patient is strong enough, a posterior gastro-jejunostomy should be done, the abdomen thoroughly flushed out with hot saline and drained through a stab above the pubis, for a few days, in the exaggerated Fowler position.

*Treatment of Hemorrhage.*—Kroenlein stated at the Congress of German Surgeons in 1906, that where hemorrhage had occurred shortly before operation, it had ceased immediately after gastro-enterostomy in eight out of eleven of his cases.

Mayo has not found gastro-jejunostomy satisfactory in acute hemorrhage and has sutured or excised the bleeding point in a number of cases with more satisfactory results. In the chronic hemorrhage and especially where the ulcer is located in the pylorus or duodenum, gastro-jejunostomy has given excellent results.

Moynihan has operated on thirty-three cases for severe hemorrhage with 18 per cent mortality; there was no hemorrhage after operation; gastro-enterostomy was done in all cases; the ulcer was excised in two cases; in eight cases the ulcer was infolded; in one case he infolded both the ulcer and the pylorus.

Tuffier says it is better not to operate in profuse hemorrhage of simple ulcer.

Monprofit says we must distinguish between the abundant hem orrhage for which surgical interventinon is so grave that it must not be attempted and the small and repeated hemorrhages that are benefitted in a surprising way by operation.

*Relation of Ulcer to Cancer.*—As from 50 per cent to 75 per cent of all cases of cancer of the stomach originate in ulcer, allowing these old cases of chronic indigestion to go on without consulting a surgeon can be justly compared with not calling in a surgeon in a case of appendicitis, as was recently suggested by my colleague Dr. Jordan.

*Results.*—Mayo reports one death in 135 no-loop operations, and says that more than 90 per cent of the patients suffering from gastric and duodenal ulcers that have undergone operation, have been cured.

Moynihan in 273 gastro-enterostomies for perforation, hemorrhage, pylorechtomy and chronic ulcers had seventeen deaths, a mortality of 6.23 per cent or less than one per cent in simple ulcer cases.

Mayo-Robson in over 50 operations including perforations, etc., had a mortality of less than 5 per cent and less than one per cent in all of his private cases.

Hartman says that in gastro-enterostomy performed under good conditions the operative mortality is almost nil.

The late results are good and should the patient again have ulcers from errors in diet, these heal far better with medical measures than they would if surgical intervention had not previously been resorted to.

He advises having all cases referred to a physician for diet, etc., as a post operative measure.

Moynihan advises keeping all cases on a limited diet for at least three months and suggest giving an alkaline bismuth mixture where there was a very acid condition of the stomach previously existing.

*Report of Cases.*—The following cases will illustrate the conditions and treatment outlined above:

Case 1. Perforating Gastric Ulcer; Closed by Suture; No-Loop Gastro-Enterostomy; Recovery.

I saw this case with Dr. Parke on January 5, 1908, about an hour after perforation. The patient gave the following history: She had eaten a hearty meal about eight hours previously and had been out during the afternoon for a walk of two or three miles and came home feeling better than usual; during the evening some one came in with a dress suit case filled with books, weighing about fifty pounds and she lifted it up from the floor to test her strength and immediately felt some unusual soreness in the region of the pylorus and went back to the library and "curled up" in a Morris chair; in about ten minutes she felt a sudden sharp pain instead of the soreness which she first experienced, vomited and had severe rigors; the pain continued, but was somewhat relieved by morphia.

The vomitus contained no blood, but consisted of the meal taken eight hours previously, in an undigested state.

When I saw her her pulse was 96 and temperature normal; there was marked tenderness and pain over the epigastrium with considerable rigidity of the recti.

From this and the following history I made a diagnosis of perforating gastric ulcer at or near the pylorus and advised immediate operation.

The following is the history previous to perforation:

Mrs. K., age 29, states that she has had digestive trouble since she was twelve years of age and at times had severe pain in the epigastrium —has always had ulcers in her mouth. Between the age of fourteen and eighteen while away from home at boarding school she had very little digestive trouble. Menstruation has always been normal; she has been married seven years; has three children, eldest six and the last confine-

ment occurred seven month ago; she has not been well since this time. She had some digestive trouble after the birth of the first child; ulcers in the mouth and pain in the epigastrium. For the past three months her digestion has been poorer than ever before, she has again had large ulcers in her mouth; sour condition of the stomach, and had been taking soda to relieve it; there has been considerable distension with gas; pain from one to three hours after meals and worse in the evenings after dinner; no vomiting; there has been a continuous soreness, and she has not been able to wear her corset for about two months; constipated; has lost about ten pounds in weight.

Two hours after perforation her pulse was 120 and a blood count made after being placed on the operating table, three and a half hours after perforation, showed 15,000 leucocytes and an other made twenty-four hours later showed 9,500.

Under ether, an incision was made in the median line extending about an inch below the navel; as soon as the peritoneum was opened the contents of the stomach were ejected through the wound, the perforation coming into view immediately; it was a round punched out ulcer about the size of a lead pencil and was located just over the pylorus, the tissues around the ulcer were very much indurated for half an inch or more and when I introduced the first sutures to close the ulcer they cut out; I put in three rows of linen before getting beyond the indurated area and this narrowed the pylorus so much that I decided to do a no-loop gastro-enterostomy, this prolonged the operation about forty minutes, but the patient left the table in good condition. A drain was passed down beneath the liver and another through a stab above the pubis, after flushing the abdomen with hot salt solution.

There was considerable drainage for several days, a modified Fowler position being used. She was badly constipated at the time of the operation and high enemas did not seem to relieve the condition much and on the third day her pulse became rather irregular and she showed there was an autointoxication, being drowsy and rather stupid; the urine showed a trace of albumin and a few narrow granular casts; this all cleared up as soon as the bowels were moved.

Sterile water was given by mouth on the second day and salt solution was given by enema just after the operation and was kept up until we felt safe in allowing her to drink freely.

No food was given by mouth until the fifth day on account of the constipated condition of the bowels and then only such food as had been sterilized by heat.

Her temperature did not go above 99 F. and her recovery was rapid and uncomplicated. She is perfectly well now, three and a half months after operation. Her diet has been somewhat restricted as suggested by Mr. Moynihan.

Case 2. Rupture of Gall-Bladder; Severe Hemorrhage From Gastric Ulcer; Obliterating Appendicitis; Cholecystectomy; Mayo's No-Loop Gastro-Enterostomy, Resecting the Ligament of Treitz; Appendectomy; Recovery.

Mr. S., a gentleman 58 years of age, was seen in consultation with his son, a practicing physician, on January 27, 1908, and the following history was elicited: His father who had had stomach trouble all his life died from the effects of this condition at the age of 60, and one aunt died of cancer of the stomach at 74. Except for a tubercular history there was nothing else bearing on the case.

Between the age of 18 and 35 he had several hemorrhages and was thought to have tuberculosis; since that time he has grown stronger and has enjoyed very good health except for some digestive trouble at times. For the past year he has had an attack of acute indigestion on an average of about once a month; has severe pain in the epigastrium lasting for two or three hours, with nausea and vomiting; has never vomited blood; has considerable gas distension; sour stomach; water brash; has lost 45 or 50 pounds in the past year, due chiefly to a restricted diet and confinement; has had a slight rise of temperature at times. He is always troubled with the gas distension and epigastric pain whenever anything heavier than a semi-solid diet is taken.

*Examination.*—There seems to be no enlargement of the stomach nor any distension; some tenderness over the pyloric region; no tumor; some tenderness over the region of the gall-bladder; liver, heart and lungs negative; slight icteroid color of the skin; conjunctivae slightly yellowed for the past few days and during this time he has been very much depressed; pulse 60, full and rather tense.

Owing to inability to pass the stomach tube no satisfactory test of

the stomach contents has been made; a test meal was given but had to be diluted to induce him to vomit; a test of this vomitus showed an absence of hydrochloric and lactic acids.

The following day while straining at stool he experienced a sharp pain in the epigastrium, vomited a considerable amount of clotted blood, became more or less collapsed and continued to have severe pain in the upper abdomen, and was only partially relieved by the hypodermic injection of 3-8 grain of morphine. I saw him two hours later and made a diagnosis of perforating ulcer of the duodenum and advised immediate operation. His pulse at this time was 110 and temperature 101 F.

He was taken to St. Vincent's Hospital and after making a blood count which showed a leucocytosis of 14,500, operation was begun four hours after perforation. His temperature had risen another degree but the pulse was practically the same and of good volume.

Under ether, an incision was made in the mid line extending down to the navel; some yellowish fluid was seen to well up into the wound; a careful examination of the stomach failed to reveal a perforation; the gall-bladder was found to be adherent to the transverse colon and had perforated just at the margin of these adhesions; I did a no-loop gastro-enterostomy and found the ligament of Treitz abnormally developed and cut it back as recently suggested by Mayo so as to prevent this loop formation; the gall-bladder was then excised and a drain passed down to the duct to drain some slight oozing coming from the bed of the gall-bladder, which was sutured over after Moynihan's method; the appendix was found to be occluded at its base and was hurriedly removed; the abdomen was flushed out with hot salt solution and a stab made above the pubis for drainage, in the Fowler position, which was used as soon as the patient was placed in bed. His condition was quite as good at the end of the operation as when we began, with a pulse of 104 and of good volume.

In the course of a few hours it was necessary to lower the head of the bed on account of the effect it had on the pulse.

He progressed very satisfactorily for 24 hours when there was some vomiting of regurgitated bile, but as soon as the head of the bed was elevated again this was relieved.

On the second day there was considerable drainage of bile, the liga-

ture evidently having cut through the cystic duct which was very friable at the time of operation. This continued to drain freely but the patient would vomit some bile about once or twice a day and this did not improve much until the drain was removed at the end of two weeks, when the gauze wick was found to be saturated with a hard material from the bile, being practically a long gall-stone and pressing on the duodenum and causing the irritation. This was replaced by a small rubber tube, but this also proved to be a source of irritation, and not until this was left out did we relieve our patient of all vomiting.

The urine contained a considerable amount of bile for about a week. Ten days after after operation it showed a trace of albumin; no sugar; specific gravity 1028; numerous small hyaline and granular casts; no acetone.

There has not been any regurgitant vomiting since all of the drains were removed; the wounds have all healed up and he is able to take long walks and is now in New England for the summer. He reports that he stood the trip well and is having no trouble with his digestion.

Case 3. Chronic Ulcer near the Greater Curvature on the Posterior Surface; No-Loop Gastro-Jejunostomy; Recovery.

Mrs. B., age 33, family history negative except that she has one sister who has had some stomach trouble for the past ten years.

Menstruation normal; has been married 14 years; has six children; eldest 13 and the youngest one year old.

About ten years ago she drank too much water while over heated one day and fainted, probably having an acute dilatation of the stomach. She vomited in a few minutes and was somewhat relived; previous to this time her digestion had been good; says she could feel a lump in her stomach for a year after this. She suffers with pain after eating which comes on before she leaves the table and usually lasts about two hours; gas distension; palpitation; pain around her heart; severe pain under the left scapula; gnawing pain in the region of the stomach; recently the pain and soreness in the epigastrium is constant and is relieved by a little food; she improves for a little while and then gets worse again; has lost about 30 pounds in weight in the last six months; bowels constipated; no tarry stools; has been troubled with a diarrhoea

for several weeks; heart, lungs and urine negative; no dilatation of the stomach.

She was referred to me by her physician, Dr. H. C. Moreland, of New Castle, Ala. After getting the above history and giving her a careful examination I advised a gastro-enterostomy which was agreed to by her physician and family and she returned on April 6. 1908, and was admitted to St. Vincent's Hospital. After being put on sterile food and water and having her teeth and mouth cleansed every few hours for 24 hours, I opened the abdomen under ether, through the right rectus, and found several scars in the first part of the duodenum, and after a careful search on the posterior surface of the stomach I found an ulcer about the size of a dime, somewhat indurated, near the greater curvature and about two inches from the pylorus.

As soon as the clamps were applied we discontinued the ether and did not give her any more until ready to close up the abdomen. The actual time of doing the anastomosis was 32 minutes. Only two ounces of ether were used during the whole operation. She left the table in excellent condition and her recovery has been as smooth as from an interval operation for appendicitis.

She was given water and nourishment by rectum for four days; sterile water was given by mouth on the second day and chicken broth on the third day. She has been kept on a very limited diet and her digestion seems better. She was placed in a wheel chair at the end of a week and rolled out to get some fresh air.

Case 4. Chronic Ulcer Posterior Wall Stomach; Adhesions to the Liver Causing Obstruction of the Pylorus; Death on the Third Day from Acute Suppression of Urine.

Mrs. C., age 28, was operated upon at the Hillman Hospital on April 8, 1908. Strong adhesions were found between the stomach and the liver, causing an obstruction of the pylorus; a large, slightly indurated ulcer was found on the posterior surface of the stomach near the greater curvature about two and a half inches from the pylorus; the whole of the lesser peritoneal cavity showed adhesions and an old inflammatory condition, probably a chronic perforation. The adhesions were broken up at the pylorus and a no-loop gastro-enterostomy was

done without breaking up the adhesions on the posterior surface of the stomach as suggested by Dr. B. F. Lund in the Boston Medical and Surgical Journal, 1905, Vol. I.

The patient remarked the following day that she had had the best night she had spent in months; she did not vomit at all until the kidney condition supervened and her general condition was good; the second night she became rather stupid and vomited some bile-stained mucous at intervals of several hours; she had been getting a saline enema every three hours, and previous to this time the secretion of urine had been quite free; during the last 20 hours before death only two ounces of urine were gotten and this was drawn by catheter; this contained a large amount of albumin and granular casts; sparteine sulphate was given every two hours hypodermatically after it was discovered that the kidneys were involved, but this did not improve her condition any, and she died on the morning of the third day.

Her previous history was rather vague; for six weeks prior to her admission to the hospital, Dr. Bandy, her physician told me she had vomited constantly no matter what was given her and that she had been nourished by rectum, but not satisfactorily; she had had slight attacks of indigestion at times for the past three or four years, but these were relieved in about a week by the administration of some alkaline treatment. She had not much pain or severe digestive symptoms until this persistent nausea developed, and the operation was done on account of this symptom, it having persisted so long she was in poor condition, her pulse being weak and rapid, but she was not so much emaciated as might have been expected, and we thought the condition might be a purely neurotic one.

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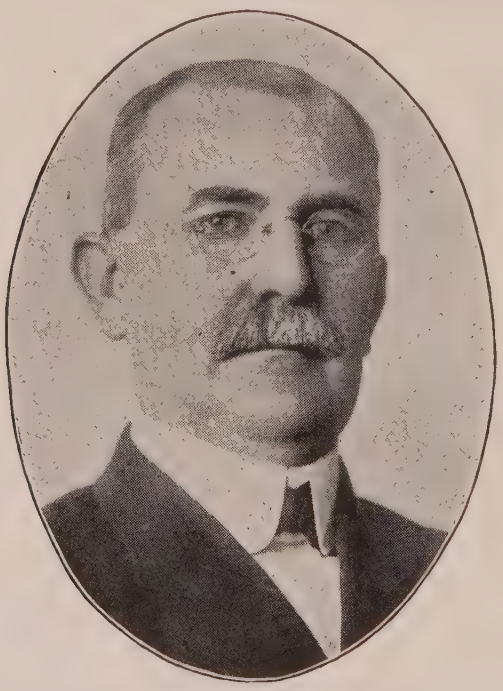
## President's Address.*

*By S. W. Welch, M.D.,*

*Talladega, Ala.*

The year which is now rounding into history has been marked by many events of interest to the Association. The health of the State has been fairly good. There have been no serious epidemics; hence it has



**SAMUEL WALLACE WELCH, M. D., Talladega, Ala.**

**President of the Medical Association of the State of Alabama. Presided at the Meeting Held in Montgomery, April 21-24, 1908.**

not been necessary to invoke the quarantine laws for the protection of the health of the State. Malaria has asserted itself pretty generally, and there have been a few outbreaks of typhoid fever. There was an

*Read before the Medical Association of the State of Alabama, at Montgomery, April 21, 1908.

epidemic of grippe which was distributed fairly well all over the State, but was attended by fewer complications than the average epidemics of this malady. Measles and whooping cough have claimed their victims, but no outbreak of the more serious ailments of scarlet and diphtheria have occurred. Smallpox has been in evidence in some localities, but has been easily controlled where ordinances existed compelling vaccination. There was an epidemic of catarrhal jaundice in Talladega county and contiguous territory during the summer of 1907, an account of which is given in a paper to be read at this meeting.

One of the original purposes of this organization was to report the nature and severity of prevailing diseases each year, and their distribution over the State. I have made strenuous efforts to secure four papers from the several divisions of the commonwealth setting forth this information. Three of the gentlemen did not answer my letters, and the fourth preferred another subject. This is a matter which should claim the attention of the association. There should be at least one paper each year setting forth the nature of the prevailing diseases in Alabama for that year, and I recommend that the State health office make a report on this subject and that the report be published along with other papers in the transactions.

There should be more freedom in reporting volunteer papers. Every physician should feel himself impelled to report to the association each year any unusual case which may have come under his care.

The Cochran monument fund is entirely inadequate to the needs of the committee having in charge this work; they cannot proceed without more funds. This money should be raised by the association at once. It had been my purpose to recommend that a special effort be made at this meeting to secure the necessary funds for the completion of the work. With this end in view, I invited Dr. Marechal, of Mobile, a life time friend of Dr. Cochran, to deliver the Jerome Cochran Lecture; subject, "Life and Labors of Jerome Cochran." He is ill in the John Hopkins Hospital and cannot be present. While I do not feel under the circumstances like making a recommendation to the association, you will pardon me, gentlemen, when I say that it is a reproach to us, that a great organization like this cannot get up enthusiasm sufficient to erect a monument to its founder.

The American Medical Association, at its last meeting, appointed a

committee, whose business it should be to bring together the secretaries of the State associations, and the editors of the State Journals. They requested a recommendation from the President that the expenses of these gentlemen be paid to a meeting to be held on June 1st in the city of Chicago. I, therefore, recommend that the expenses of the secretary of this association be paid while in attendance on that meeting.

The State schools for the blind are located in Talladega, and the pathos of the life that walks in darkness is ever before one. It is appalling when we see these little boys and girls groping their way about the world with outstretched appealing hands, to realize that at least one-third of them could have been protected from this awful doom. It is estimated that specific ophthalmia neonatorum is responsible for one-third of all cases of blindness. The American Medical Association has appointed a standing committee for the purpose of interesting the State medical organizations of the Union in a concerted effort to stamp out this baneful disease. I, therefore, recommend that the association get in touch with this committee and adopt such measures as may be necessary to enable the State health office to collect through the county health officers, such data as will be useful to this national committee, and that strenuous efforts be made to secure such laws as will be necessary to meet the exigencies of the case.

This has been a legislative year and it gives me pleasure to report to you that many of the recommendations of my predecessors have crystalized into law. A bill establishing a colony for epileptics was passed at the adjourned session of the legislature. This is a monument to my immediate predecessor, Dr. McWhorter. The colony was placed under the supervision of the Board of Trustees of the Bryce Hospital. A bill to provide for an asylum for inebriates and drug habitues was lost. There was no bill introduced to provide for an asylum for the feeble minded. This should be one of the needs of the hour, kept constantly in the mind of the profession. We have provided for our insane, our epileptics, our blind and our deaf, but the largest class of our unfortunates has yet to be looked after. It is estimated that one in every five hundred births is a mental degenerate, and if it survives, will in time become a public charge upon the commonwealth. They are found as often in the homes of the opulent and well bred as in the haunts of poverty and wretchedness. An eminent educator, devoted to the work

of the development of these unfortunate children, has said that their education differed from that of normal children only in degree, and the vast majority of them could be made self-sustaining if taken in childhood by experts, trained especially for this work. Putting aside the financial aspects of the case, think, gentlemen, of the misery such an institution would save these poor unfortunates by giving them employment and lifting them from without themselves and their stolid wretchedness.

The law regulating the practice of medicine has been so amended as to place the examination of all applicants in the hands of the State Board. The State Board is further empowered to establish reciprocal relations with other State Boards of Examiners, and to issue certificates without examinations to surgeons of the army and navy and marine hospital service. While the present policy of the association has done much more for the profession than those of us who live in the centers of population know and while the stability of the organization has been the chief factor in attaining this end, yet it seems to me that the adoption by the Board of some plan by which an applicant's knowledge of the art along with the science of medicine could be estimated, would be productive of good results. There is a great demand today for men who can do things and it is a source of congratulation that few people in the State live beyond the reach of skilled medical and surgical aid. Successful laparotomies and scientific accouchments are not at all rare in the remote rural districts. I knew two young men in the rural districts to do a laparotomy on a negro shot in the abdomen; they stitched up two perforations of the stomach while an attendant fanned the flies away. The negro made an uneventful recovery. It was said that the wound was identical with the one that killed President McKinley, and I have often thought of the anguish that might have been spared the American nation if these two boys from the hill country of Alabama, could have been in the city of Buffalo on that fateful day.

Amendments to the law relating to public health render this law much more effective and simple in its operation. The facilities for collecting vital and mortuary statistics have been greatly simplified and the appropriation is ample for the present needs of the Board. The salaries of county health officers have been increased, but are still not commensurate with the services rendered in some instances. The tax payers

have been persuaded that this increased expense provided for the health department is for the good of the State. The execution of these laws remains with the individual doctor. The State health officer and the county health officer are helpless without your hearty sympathy and willing co-operation. Let me tell you that the system and its usefulness is on trial, and if we cannot show practical results to the next body of law makers, that shall assemble in Montgomery, we may expect and will deserve to have the liberal aid extended taken from us. We have claimed, as a body, that our efforts to enlarge the scope and increase the efficiency of the health laws of Alabama, were dictated by a spirit of altruism. If the rank and file of the profession should lose sight of this high standard which we have set for ourselves, and do not keep step with the spirit of the new regulations, all the efforts of the executive branch of the department will meet with failure.

The State Board has added a State statistician to its office force, whose business it will be to record all reports of births and deaths sent up from the counties in the State. The importance of this work may be illustrated by an incident which transpired in Talladega county two years ago. A boy was being tried in the criminal court, charged with illicit relations with a girl who had not reached the age of consent. Reference to the records of the health office revealed the fact that the girl was fourteen years and four months of age when she consented to the caresses of her youth suitor. These records are liable at any moment to be useful to the courts, and we should strive to demonstrate to the legal fraternity the importance to them of this branch of the department of public health. After reciting this incident, it is needless for me to admonish you to be accurate in making your returns of births and deaths to the county health officer.

The health department has established a pathological laboratory also. This is one of the greatest strides forward made by the association in a number of years. It is now possible for any doctor to have an epidemic of an infectious or contagious disease in any quarter of Alabama investigated. The examination of suspected water, of suspected milk, or any other source of infection will be made at the expense of the State. This is an equipment that the health department has long wished for and it is to be hoped that its practical usefulness may be demonstrated to such a degree that the next body of law makers will feel still

more generously inclined toward aiding us in the control of the diseases which interfere with the wealth producing factors of the State. It might be well to note right here that the Jefferson County Medical Society has added a pathological laboratory to its office of meat and milk inspection. There has been some friction between the Board of Health and the city authorities. In view of the stupendous possibilities of Greater Birmingham, it is greatly to be regretted that politics should be allowed to interfere with the settlement of questions pertaining to public health. It must be known to all men that sanitary conditions alone can limit the future of this center of marvelous industrial development. It is a question of vital interest, not only to every citizen of Alabama, but every citizen of the South, that no mistakes be made in the sanitary machinery. He who, for political or other reasons, would stand in the way of a proper sanitation of this imperial district, must account to the future for thousands of human lives and the loss of millions of dollars worth of property. I recommend that this association through the State health officer, officially co-operate with the Jefferson County Board of Health in their efforts to lay broadly and well the sanitary superstructure of Greater Birmingham, and that he convey to that body an expression of our hearty sympathy, endorsement and support in its past and future efforts to that end.

The attention of the civilized world is now directed to the extermination of tuberculosis. A number of States and a large number of municipalities have established sanitoria for its study, treatment and prevention. The attention of philanthropists has been directed to it and numerous donations have been made in the war against it. I wish to direct your attention to the Hodgskin Fund, which appropriates $1500.00 for a prize for the best essay on the relations of atmospheric air to tuberculosis to be read before the next International Congress on tuberculosis, which will be held in Washington, September 21st to October 12, 1908. This fund is in the hands of the Smithsonian Institute, and further information regarding it can be had by reference to that institution. The State legislature at its last session, passed a bill establishing a State sanitorium for the treatment of tuberculosis. This bill provided for the appointment by the Governor of a Board of Trustees whose duty it should be to locate and establish this sanitorium, elect its officers and

complete the machinery for its proper conduct. The Governor in his wisdom has not seen fit to appoint this board of trustees, and consequently the movement has not been organized. He is, however, in hearty sympathy with the movement and will at the proper time take action in the premises. A special hour has been set apart at this meeting for the discussion of this subject, so vital to the interest of the entire State. A public meeting will be addressed by a number of distinguished gentlemen at home and abroad. Additional interest will be added to the occasion by the display of stereopticon views by the American Exhibition of Tuberculosis. This exhibit will be in Montgomery for the week, and it is hoped that every physician present will see it.

The State has voted prohibition and while it may not have met your approval, it is no longer a question for debate; it is now a question of obedience to law and suppression of crime. No set of men can so easily violate this law as physicians, nor are any set of men so open to temptations to violate it. The temptation appeals not infrequently to that which is noblest and best within us, but let me admonish you, gentlemen, that as leaders of thought in the communities in which you live that you do not lend yourselves to the slightest evasion of this statute. The State looks to the medical profession as one of its chief bulwarks against crime, one of its chief exponents of good order, and it matters not what your opinions on this subject may have been, it is now your highest duty to uphold without equivocation the law as it stands. The same remarks apply to the law regulating the sale of drugs.

Pursuant to a suggestion made in a previous clause of this message, allow me to direct your attention further to the public school system of the State. A consideration of the public schools is especially opportune just now since the last legislature established a public high school for every county in the State. The recent catastrophe in Cleveland, Ohio, was the result of a lack of attention to details of architecture. The whole country stood aghast at the sickening horror of nearly three hundred little children burned to death. The sufferings entailed on these helpless innocents by the stupidity, avarice or carelessness of the School Board was ended in a few minutes; but the horrors of a life of blighted hopes, wrecked ambition and ruined fortune, which follows in the wake of invalidism induced by bad sanitary environments during the school life, live on and on for a generation and are probably transmitted to the next. No educational system is approximately complete

which does not make provision for safeguarding the health of the child. A sound mind in a healthy body is an aphorism handed down to us worth perpetuating. We cannot have a working productive unit, no matter how brilliant the mental equipment may be without a vigorous body. The scintillating exceptions which sparkle in history, accentuate this rule as applied to the evolution of the problems of every day life. It is the athlete that is manning the great industrial enterprises of the day and as these enterprises increase in complexness, the necessity of a proper conception on the part of school boards to develop the bodies along with the minds of the children is accentuated. To say the least of it, the child's environment should not be so vicious as to entail damage to his physical economy. The influences which lead to impairment of health are felt more in our female seminaries than elsewhere. It is the exception and not the rule for a girl to go through the school age without developing some irregularity of important functions; it is a grave question as to whether the mothers of the next generation are rendered more efficient for the important duties of life by the environment met with in the average boarding school. Every public school should have a medical inspector, under the direction of the State health department, whose duty it should be to watch over the bodies of the public school children. The attention of the association is directed to this matter, confidence being had in the wisdom of the Board of Censors to make such recommendations as the situation demands.

During the past year the Medical Association of Alabama has lost by death several prominent members. Conspicuous among these who have rested from their labors, but whose works live after them, is Dr. R. F. Michel, of Montgomery. Dr. Michel was one of the most prominent physicians of the State; he was born in Charleston, S. C., Feb. 15, 1827, and was a son of Dr. William Michel and Eugenia Fraser Michel, both natives of Charleston and of French and Scotch descent. He was educated in Charleston; graduated from the medical college of that city in March, 1847, and immediately began the practice of medicine there. In 1848 he was elected professor of materia medica of the Charleston Medical Institute, which position he held until 1860, and demonstrated anatomy in the same institution for ten years. He entered the Confederate army as a surgeon in General Evans' brigade in 1860, and only left the service at the surrender of General Lee. After the

war, he located at Montgomery, where he devoted himself to the practice of his profession. He helped to reorganize the Alabama State Medical Association in 1868 and with one exception was the last of the reorganizers. It will be seen that he was a member of this association for nearly forty years, during which time no member of it enjoyed greater popularity. In 1872 he was elected Vice-president of the American Medical Association for one year; in 1869 he was elected President of the Medical Association of the State of Alabama and in November of the same year was elected President of the Medical and Surgical Association of Montgomery. He was appointed Surgeon General of the State of Alabama in 1883 on Governor O'Neal's staff and was orator of the Medical Association in 1886. He was elected Counsellor of the Medical Association of the State of South Carolina in 1859 and at the time of his death was Grand Senior Life Counsellor of the Medical Association of the State of Alabama. He officiated as a member of the Board of Health of Montgomery since 1869, acting a part of the time as president of that body. He was a contributor during the whole of his life to the medical literature of his day, a number of which articles received admiring comments all over the land. He died on the 19th day of April, 1907, and was buried in the home of his adoption.

Dr. A. A. McKittrick, of Evergreen, was born in South Carolina more than eighty years ago, moved to Alabama in early life and was actively engaged in the practice of his chosen profession for nearly half a century. He entered the Confederate army at the opening of hostilities as a private soldier, but was promoted to the medical staff in a few months, where he rendered efficient service during the entire unpleasantness. He was at the siege of Vicksburg and was captured there. He located at Evergreen at the close of the war and passed the remainder of his life there. He was a Grand Senior Life Counsellor of the Association and enjoyed the esteem and respect of his brethren. He died in Evergreen on January 18, 1908, and was buried from the Presbyterian Church with Pythian honors.

Dr. William McLane Pitts was born in Uniontown, Ala., on June 14, 1873. He attended the common school at Uniontown, Murphree's Military School at Marion and D. M. Calloway's School for Boys, located at Selma. He graduated at Louisville Medical College in 1893. He did post graduate work at the Johns Hopkins Hospital, at the New

York Schools of Medicine and Berlin. He practiced medicine four years in Brookwood, Tuscaloosa county; moved to Selma in 1895, where he continued in the practice of his profession, honored by his brethren for his professional attainments and loved by his people for his gentleness and amiability of spirit. He died on the 25th day of December, 1907, loved and honored by all who knew him.

Death even to the aged shrouded as it is in mystery is surrounded by more or less of sadness, but when it comes to a man in the flush of his youth the emotions are deepened. One of the most shocking items of news that has flashed over the wires of the State in the past few years was that announcing the horrible death of Dr. James Buckner Killebrew. He was a man of magnificent physique, in the dewy flush of his young manhood; a trained athlete, and it is hard to associate the stillness of death with his athletic form. He was a man of unusual ability, high professional attainments and splendid character. He was a man who loved his friends and in them saw no fault; honest and sincere to a degree he could not dissemble any prejudice which he might have toward his fellow man; strong in faith in himself he sometimes drove men from him in his brusqueness, but all of us feel now since the curtain has been drawn over his splendid young life that we have lost one of the most brilliant members that this association has ever had. Dr. Killebrew graduated from the University of Virginia and spent one year in the New York Polyclinic as House Surgeon in the hospital; he worked two years in the Bryce Hospital at Tuscaloosa; moving to Mobile, he was elected Professor of Gynecology in the Medical Department of the University of Alabama. He was regarded by his confreres as authority on his branch and a very skillful operator. He was President of the Mobile County Medical Society at the last meeting of this association and extended the hospitality of the city to us on that occasion. He was still president at the time of his death. As you all remember, he was killed in an automobile accident in the home of his adoption in the summer of 1907.

The solemn lesson that comes to us from a look at the tragic side of this picture should admonish us that each day's labor should be done in a spirit of devotion, which would make it better than the day's labor that preceded it. That we should work for the sake of the work which our hands find to do, striving at all time to have the finished product

more perfect and symmetrical than any other product of its kind which our hands have fashioned in the days that have passed by. We should be reminded, too, to wear about our loins the girdle of life so loosely that but a moment's notice will suffice to loose the clasp and lay the burden down.

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## The Importance of the Study of Physiology by the General Practitioner of Medicine.*

*By W. P. McAdory, M. D.,*

*Birmingham, Ala.*

Mr. President, Members of the Medical Association of the State of Alabama, Ladies and Gentlemen:

To be permitted to deliver an address before an intelligent audience is an honor; to be selected to deliver an address before an audience composed largely of the representatives of the profession who minister to the health, consequently to the wealth and happiness of the people of a great commonwealth, is indeed a distinguished honor.

As I take it, it is the duty of the orator on an occasion like this to express some thoughts upon a subject of interest to his hearers, clothed in words that are pleasang to the ear. Moreover, whenever any one is permitted to deliver an address to an intelligent audience, there is always the possibility of saying something that will stir into activity the mind of some hearer, direct into new channels the processes of thought of some one, which will result in the benefit of not only the individual himself, but all mankind.

Fully appreciating the honor that has been conferred on me, and the duties and responsibilities of the position I occupy, I would be untrue to my feelings if I did not first express my sincere appreciation for the honor, and ask your kindly indulgence as I attempt to perform the duties of orator of the Medical Association of the State of Alabama.

Medicine today is nearly an exact science. This scientific position has not been attained in a year, a decade nor a century, but founded upon

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*The Annual Oration delivered before the M. A. S. A. at Montgomery, Ala., April 22, 1908.

nature, it has gradually developed, and each step in this development has been marked by the saving to the world countless lives and suffering. The practice of this science is the art of handling disease, and these artists are ordinarily called practitioners of medicine.

In order to have the proper conception of the diseases of any organ or tissue of the body, we must first know its normal structures and function. For this reason all medical schools now have graded courses, in which the first years are devoted to instruction as to the normal body, and the later years to the study of the abnormal, based upon a proper understanding of the work in the first years, and the medical student when he graduates from college, considers disease as a perverted normal, and the object of treatment the return to the normal condition.

For the normal structure we have anatomy, and for the normal function we have physiology. A few years ago physiology was considered the poetry of medicine; it is now looked upon as a science and exacting as only a science can exact. Then consisting largely of theories which fit nicely in one another like the tongue into the groove in a delicate piece of cabinet work; today it is a mass of facts, and where the fact is not known, theories which fit best all known phenomena, and one by one these theories are giving away as fast as the facts are being worked out—so the physiology of today is more nearly an exact science than it was a year ago, in fact it has made rapid progress in the last few years. Its importance is realized by the schools of medicine, but I wish for a few moments to ask your attention to the subject of the importance of the study of physiology by the general practitioner of medicine.

The physician when he leaves college has a fair knowledge of the structure of the human body, which knowledge leaves him rapidly as soon as his examinations are passed, but the chief facts he has in his text books with which he is familiar, and to these he can refer at any time. But with physiology this is not true, because our knowledge of the normal functions of the organs of the body is constantly increasing, so that the text book of today is out of date in a few years, and for the physician to become familiar at all with these facts requires constant study.

How is it with the great mass of medical men? They seldom or never think about physiology, much less keep up with its advances,

having the effect that if they have any inclination to view their profession in a rational way they will go through life treating disease from the standpoint of their college days and as all advancement in scientific medicine must be based on the advancement of our knowledge of the normal, it is a matter of impossibility for them to keep pace with the times, and as they attempted to do so by studying the pathology and treatment of disease, they find themselves unable to make these fit in with their ancient ideas of the physiology, and soon their mind becomes confused by the admixture of a conglomerate mass of facts, theories and superstitions—following blindly the lead of some one perhaps of doubtful reputation, losing their individuality, and becoming empiricists of the worst kind.

To illustrate what I mean: Suppose the physician graduated at the time when it was taught that the heart and arteries carried air, and ceased to study physiology at that time. How would he feel in reading a text book of today on the treatment of the diseases of these organs? While this is somewhat far-fetched, and the main facts concerning the circulation were proven and published in 1628, and when these facts were known, the ideas of the diseases of the organs underwent a revolution. Since this time little by little our knowledge of the normal circulation has advanced, and with each advance a corresponding advance in the ideas of diseases. But today our knowledge of the circulation is not perfect. The man who finished his physiology ten years ago will, if he should presume to examine a recent text book, find himself often in strange fields, and studying his text books on the practice of medicine discover that he soon becomes lost, or must follow blindly the author, and he can never, in his own mind, make things fit, until he goes back and becomes familiar with the accepted idea as to the normal.

There is a growing tendency in this country for doctors to go off and attend post-graduate courses. As I have watched them attending these clinics and lectures they have often reminded me of first-year medical students attending clinics. Often more good would be accomplished by the physician, and more benefit derived by his patients, if he would attend an undergraduate course on the elementary branches; then he would be in condition of mind capable of appreciating the post-graduate work.

When we stop and think of how few men keep up with the advances in the elementary branches of medicine, it is no wonder that we have

a large number of empiricists, and that superstition is rife even in the minds of many of the elect. The majority of medical students, when they graduate from college, are inclined and intend to be practitioners of scientific medicine; get your medical journals of largest circulation and you will see testimonials from doctors, and be impressed with the fact that this blind empiricism and rank superstition exists, and I do not believe that this would be true if these men had kept up with their elementary branches. It is impossible for a man to practice rational medicine without keeping up with these branches and I believe it is equally impossible for a man to keep up with his elementary branches and be any thing but a practitioner of rational medicine, for with each advance he can see clearly and more clearly the relation between cause and effect until finally he becomes fully imbued with the idea that there can be no cause without its effect, and when he sees the effect and does not know the cause he begins and seeks earnestly to find it, thus adding always the element of the game to his work, not holding behind that popular superstition that the Creator of the universe moves in a mysterious way his wonders to perform.

There comes to every practitioner of medicine, oftentimes when he would like to play the Arab act, fold his tent and silently steal away. Let us hope that in the going he carries with him the consciousness of duty well performed, and this he cannot do unless he has given his patient the advantage of all possible that is known to medical science today.

If the general practitioner of medicines kept up with the advance in the elementary branches, what effect would it have upon medical science?

Today we seem to depend upon the laboratory man for all of our research work and advancement, and they are doing all that they can. It is the general practitioner who sees the diseased patient first, and when we look back we see that it has been he who has observed the phenomena that started the inquiry along the lines that ultimately proved correct. It was Harvey, a general practitioner in England, who discovered the circulation of the blood, and it was Beaumont, a practitioner in the great Northwest, who, observing through an accidental gastric fistula, the phenomena which took place in the stomach, started the inquiries which have today resulted in our knowledge of digestion. While the practitioner does not work out all of the steps that prove a fact, yet he it is who sees the first departure from the normal

and it is upon these observations that the laboratory man is dependent for suggestions as to what line to pursue.

Let us never lose sight of the fact that there can be no perfect scientific medicine until the function of the normal is known, and when our ideas are based upon theories, these ideas must give way to others, if, when the fact is known, it is different from the theory used. For the past few years too little attention has been given to the study of the normal, and the profession generally have seemed to be satisfied with building their superstructure upon a foundation of theories, and many of them have crumbled and will continue to crumble, until they are founded up physiological fact. This has been realized, and today a great work is being done and many physiological laboratories can only develop lines of research that are indicated by some phenomena that has been observed, usually some departure from the normal observed by a general practitioner.

What is it that has hindered all scientific advance in all ages, put every stumbling block in its way from ridicule to crucifixion?—Superstition. It is this same superstition that has stood and is still standing in the way of medical advancement. Not superstition on the part of the people, but of the medical men. That intense desire on the part of human mind to account for all things by means of some vague supernatural cause—living in the constant expectation if not hope that a miracle will be performed. It is this that clips the wings of hope and chills the life blood in the heart of desire. Let the majority of the physicians come to the practicing belief that there can be no cause without its effect and no effect without a cause, and you will see scientific advancement in medicine, such as was given to surgery by the discoevry of anesthesia and antiseptics. This can be brought about in no way except by the doctors keeping up, not only with the advanced branches, but the elementary branches of his profession.

Besides the beneficent effect of scientific advancement, would the people be benefited? Yes. Any advancement toward the scientific treatment or prevention of disease, after it has been proven beyond the question of doubt, should be given to the people that they may reap the benefit. How is it today? At least one generation of physicians must die out before the masses of the people receive such benefit, and often this is not sufficient, but succeeding generations must pass away before the long-suffering public are allowed the benefit of scientific discoveries made years before. If you do not believe this, look around you and observe. Antitoxin as a specific for diphtheria, has now been prov-

en a number of years. How many physicians use it universally, and how many are there who do not use it at all? Look again, into your journal of largest circulation and see the various decoctions that are recommended as specific for this disease, given by physicians, often along with his pedigree, and the lucrativeness of his practise. Viccination is a preventive against smallpox—absolute, scientific—yet today the people of Alabama pay thousands of dollarh each year for the care of smallpox patients, and vaccination has been known since the eighteenth century. If we will look into these people who are not vaccinated in the great ma.ority of instances we will find some doctor at the bottom of it. Take the other infectious diseases and if the known methods for their prevention were practiced they would practically be wiped off the face of the earth in a few years. Tuberculosis is possibly better known by the laity than any other of this class, yet why is nothing more done to check its spread? I believe there hardly exists a voter in the entire State who does not believe absolutely what some doctor says about diseases, and if the people of Alabama realized the importance of its prevention to a small fraction of per cent as much as every doctor should, tuberculosis sanitariums would be founded, anti-spitting laws not only passed, but enforced—in fact, all precautions necessary would be compulsory. But how do the physicians act. With indifference that surely could be born of nothing but ignorance; true, some are active and doing all they can, but they are nothing as compared with the great mass who seem to care nothing about it. Suppose when a physician when asked what he thought of the mosquito theory of yellow and malarial fevers, that instead of scratching his head and saying that he did not take much stock in these new fads, said, theory, theory, it is not a theory, but a fact. How long would it be before all of the people would know that the mosquito was the means of spreading these diseases. Is it really that the physicians are careless? No. It is because they do not keep up with their elementary branches sufficient to have minds properly trained to accept these advances, and use them and preach them as facts. It is because they have grown away from their ideal which they possessed on leaving college. They have only in less degree the belief of the ancients, that smallpox is the visitation of the iniquities of the father unto the children of the third and fourth generation. I dare say that if you will hold conversation with any physician he will denounce this. But does he practice what he preaches, and if he really believed it he would. If such were the case preventive medicine would have an un-

heard-of boost. This is one of the effects of the general practitioner keeping up with his physiology.

Another thing, there is nothing more important to the human race than the proper secretion of milk by the nursing mother, yet today very little is known about normal lactation, or the means of normally modifying it. Yet who is it that has the care of these mothers, and who is it that by proper observation should work out this problem? Is it the laboratory man? No; it is the general practitioner. If one-tenth of the effort that has been expended on the so-called modification of milk, had been exerted along normal lines, much more good would have been accomplished, many lives saved, and that moral debt which the profession owes to the people, of overcoming the desire on the part of the women not to nurse their children, would not be so great.

Lactation is but taken as an example of many of the normal functions about which we know very little; all are important, and it devolves upon the general practitioner, by his observations, to work them out, or suggest lines of inquiry that will result in their being worked out.

Take the average community in this country, and who is accepted as the educated scientist, knowing all things pertaining thereto. It is the doctor. He wields an influence that is great and far-reaching in its effects. But few fads, or popular superstitions exist that cannot be traced to the advice of the family physician of the great grandfather, or some old Indian, and have with time, unlike the rolling stone, become a legacy, and more potent with age—a friend of mine lost the practice in a family because he refused to blister the calves of the legs in pneumonia, because a doctor who had been dead fifty years, once said that would cure any case of pneumonia. Examples like this are legion, familiar to all, and when we are inclined to censure the people, let us be sure that our own skirts are clean. Suppose every physician really believed that there could be no cause without an effect, and no effect without a cause, and going day in and day out teaching this by precept and example, quackery, with all of its delusions, would soon lose its influence over the people much to the benefit of the people. It is hard when a loved one in a family is sick nigh unto death, to say to the family: I do not know, I want help, I must wait and see. It is far easier to leave the impression that there is some mysterious cause, which is only capable of being understood and explained by a Supreme Being. Then, if the patient gets well you have performed a miracle, and if the patient dies, hide behind that revered saying the Lord gave

and the Lord taketh away. This may be true, but I cannot conceive that an All Wise, All Knowing, All Loving Creator, would intend that his dictates should be used to shield ignorance or neglect. To observe some phenomena which aids in any way toward the establishing of a physiological truth confers upon humanity a greater blessing, deserves greater praise and credit, than leading victorious armies, or making the welkin ring in legislative halls.

One Sunday evening during the winter of 1898, I sat in the Metropolitan Opera House in New York City, listening to a sacred concert, given by an orchestra composed of over an hundred artists, led by an artist's hand. Early in the evening the Cavillera Rusticanna was played. Throughout the first act, you could see the entire audience was impressed with the strife and struggle as expressed by the music and was thoroughly aroused, when lo they drifted into that beautiful intermezzo —the audience immediately, and with a sigh, settled back in their seats as if to go to sleep.

How like the man who grows old practicing empirical medicine! Any man who spends his life in relieving pain and the distress incident to sickness, to the best of his ability, deserves to spend the latter years of his life surrounded by a competency, and the love and respect of children and children who he has brought into this world, and as he passes out at the west gate, to wrap the draperies of his couch about him, and lay him down to pleasant dreams.

Later in the evening, when it seemed that the audience was ready to adapt itself to any mood that should be directed by the music, the leader with two or three strokes of his baton caused the entire orchestra to strike three or four beautiful chords; after the last chord silence reigned for an instant, the entire audience seemed to wake up, then throughout the orchestra bedlam reigned, every group of instruments seemed to be carrying a different time—but in a short time, over in one corner of the orchestra, I heard a fife playing away, carrying the original theme, then the flutes took up this theme, and as each succeeding group came in, the audience sat further forward in their seats, until finally the entire orchestra was united in one sweet melody, shadowed forth in the original chords. After the last note had sounded, every ear in the audience was strained to catch the last faint echo, and after it had died away, there was fully a minute's silence, then cheer after cheer rang out from that great audience.

How like the man who spends his life practicing scientific medicine —his graduation is the first sweet chords—then when he enters the practice of medicine, the competition, the struggle for a livelihood, and the popular superstitions of the community in which he locates, are the first discords and strife which come in the beginning of every man's career. Then he gets one case in which the effects of his rational scientific work tells that is the one incident that will ever shine out throughout his entire life. One by one he becomes accustomed to viewing disease in a scientific way, until it becomes second nature to him, and the phenomena which are familiar to him are handled by his mind reflexly, and when he sees a peculiar phenomenon he is on the alert at once, nothing so important as getting at the bottom of it, and as he grows older, his opinion is more and more valuable on account of his habit of observation, and while he may grow old in years he will never grow old in his profession and he deserves to spend the latter days of his life surrounded by friends and loved ones he also has the respect and confidence of the younger practitioners of medicine, and when he comes to die it is in the saddle, and the community in which he lives will write on his tomb, "Here lies one who loved his fellowmen."

Abou Ben Adhem (may his tribe increase)
Awoke one night from a deep dream on peace;
And saw, within in the moonlight in his room
Making it rich, and like the lily in bloom,
An angel, writing in book of gold:—
Exceeding peace had made Ben Adhem bold,
And to the presence in the room he said,
What writest thou?—The vision raised his head,
And with a look made of all sweet accord,
Answered, The names of those who love the Lord,
And is mine one? said Abou. Nay, not so,
Replied the angel. Abou spake more low,
But cheerily still, and said, I pray thee then
Write me as one who loves his fellowmen.
The angel wrote, and vanished. The next night
It came again with great awakening light,
And showed the names whom love of God had blest.
And lo, Ben Adhem's name led all the rest.

# Editorial.

**W. H. BELL, M. D., Editor.**

The Journal will be mailed on or about the 15th of the Month. Subscribers failing to receive it promptly will please notify us at once

We cannot promise to furnish back numbers

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The editor is not responsible for views expressed by contributors.

All communications should be addressed to THE ALABAMA MEDICAL JOURNAL, 109½ N. 20th St , Birmingham, Ala.

## The Meeting of the State Medical Association.

The annual meeting of the Medical Association of the State of Alabama, held in Montgomery April 21-24, was a most pleasant and successful one. There were more than four hundred doctors in attendance. The sessions were held in the hall of the House of Representatives of the State capitol. Dr. Samuel Wallace Welch, of Talladega, President, presided over the meetings.

The first day's session convened at 12 m. Tuesday. Rev. E. E. Cobbs, of Montgomery, opened with prayer. An address of welcome was delivered by Dr. H. B. Wilkinson, of Montgomery, as President of the Montgomery County Medical Society; Mr. C. P. McIntyre, city attorney of Montgomery, representing the mayor, gracefully welcomed the doctors to the city of Montgomery. Governor B. B. Comer on behalf of the State extended a most hearty welcome. In the course of his address the Governor announced the names of those appointed as members of the Board of Trustees of the State Tuberculosis Sanatorium, for

the establishment and maintenance of which the last legislature had provided. They are as follows: Dr. Glenn Andrews, of Montgomery; Dr. B. L. Wyman, of Birmingham; Dr. Geo. T. McWhorter, of Riverton; Mr. D. H. Marbury, of Birmingham, and Hon. H. F. Reese, of Selma.

We publish elsewhere in this issue the annual message of the president.

The report of the senior vice-president, Dr. A. J. Coley, showed that considerable improvement has been made during the year in many of the county societies. The junior vice-president, Dr. S. C. Henderson, of Brewton, was absent on account of sickness, and his report was passed.

A splendid scientific program had been prepared by the president, and excellent papers were read by members of the association, many of which we expect to present to our readers in the pages of the Journal as our space may permit. In addition to the papers read by the members, were those read by several eminent visitors, viz: Dr. Chas. H. Mayo, of Rochester, Minn.; Dr. J. H. Abraham, of New York; Dr. Chas. Wardell Stiles, of Washington, D. C.; Dr. Thomas McCrea, of Baltimore; Dr. J. F. Oechsner, of New Orleans, and Dr. E. W. Peterson, of New York.

There was great disappointment on account of the absence, due to sickness, of Dr. E. L. Marechal, of Mobile, who had been selected to deliver the Jerome Cochran Lecture, which was a special order for 11 a. m. Wednesday.

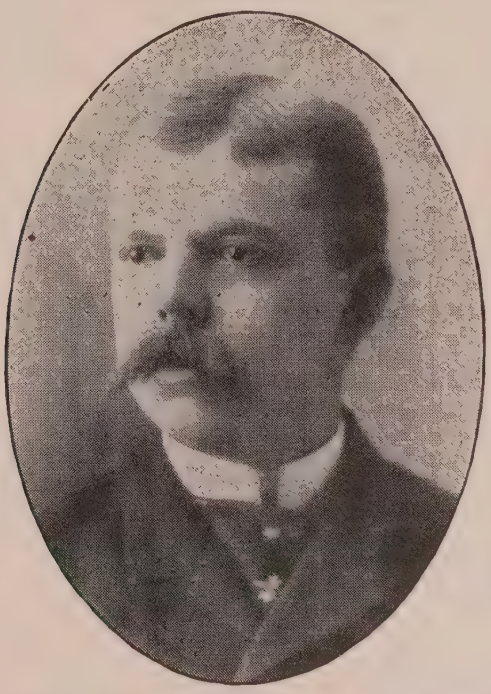
The Monitor's address on Wednesday evening at the Grand Theatre by Dr. W. M. Wilkerson, of Montgomery, was a splendid one and out of the ordinary. The Annual Oration by Dr. W. P. McAdory, of Birmingham, on the same evening was also good.

One of the features of the meeting was the symposium on tuberculosis held in the old First Baptist church on Thursday evening. Addresses were delivered on this occasion by Dr. Glenn Andrews, of Montgomery; Hon. H. T. Reese, of Selma; Dr. S. A. Knopf, of New York, and Maj. W. W. Screws, of Montgomery. Stereopticon views

and lectures were also given by E. G. Routzahun, Director of the American Tuberculosis Exhibition.

The last day, Friday, was taken up chiefly with the report of the Board of Censors, the revision of the rolls and the election of officers.

The Board of Censors reported adversely on the two resolutions introduced by Doctors McAdory and Riggs, the delegates from the Jefferson County Society.



**BENJAMIN LEON WYMAN, M. D., L. L. D., Birmingham, Ala.**

**President of the Medical Association of the State of Alabama; President of the Southern Medical Association; Member of the Board of Trustees of the State Tuberculosis Sanitorium, Etc.**

These resolutions sought, one to change the representation of the county societies, increasing the number of delegates of the larger societies in accordance with the membership of each society; the other to make eligible for holding office in the association any member, instead of only the counsellors. After considerable discussion of the

question the report of the Board of Censors was overwhelmingly adopted.

The following officers were elected for the ensuing year: President, Dr. B. L. Wyman, of Birmingham; Junior Vice-president, for the northern division, Dr. R. J. Redden, of Sulligent; Secretary for five years, Dr. J. N. Baker, of Montgomery; Treasurer for five years, Dr. H. G. Perry, of Greensboro; Members of the Board of Censors, Dr. Glenn Andrews, of Montgomery, and Dr. S. G. Gay, of Selma; Orator, Dr. W. D. Partlow, of Tuscaloosa; Alternate Orator, Dr. J. P. Stewart, of Attalla. The following Counsellors were elected: Drs. J. B. Letcher, M. L. Malloy, J. P. Stewart, W. S. McElrath and W. A. Burns.

The social features of the meeting were of the characteristic kind provided by the doctors of Montgomery, and yielded great pleasure to those attending. The committee of arrangements did themselves proud in preparing this part of the program. The committee consisted of Drs. W. M. Wilkerson, J. L. Gaston and I. L. Waltkins. On Tuesday immediately after adjournment cars were in waiting to carry the doctors to the Country Club, where an elegant luncheon was served. On Wednesday evening following the Annual Oration and Monitor's Address at the Grand Theatre the doctors were taken to the Beauvoir Club on Perry Street, where were gathered the flower and beauty of the capital city to entertain them at a most delightful reception. Refreshments, music, dancing and social converse caused the hours to pass rapidly and furnished one of the most joyous occasions of the meeting.

The barbecue at Electric Park on Thursday afternoon was most enjoyable and closed the social functions.

The meeting as a whole was a big success and one of the best we have ever attended.

Birmingham was selected as the place of meeting for next year upon the invitation of Dr. McAdory, delegate from Jefferson County Society.

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## The Law Regulating the Practice of Medicine in Alabama and the Meeting of the Board of Examiners.

We give below a letter sent out by Dr. W. H. Sanders, Chairman of the State Board of Examiners, giving points of information concerning the law regulating the practice of medicine in this State and the time and place of the next meeting of the Board.

We are authorized to state by Dr. Sanders that in addition to the examination to be held June 16th, an additional special examination will be held on July 7th at Montgomery, for the accommodation of some who would not be eligible to apply on June 16th, and some others attending colleges and who could not apply at that time.

Further information can be had by addressing Dr. Sanders.

"A new law regulating the practice of medicine in this State is now in operation.

The branches upon which applicants will be examined are: Anatomy; chemistry; physiology; the etiology, pathology, and symptomatology of diseases; surgery; obstetrics and obstetrical operations; gynecology; physical diagnosis; hygiene and medical jurisprudence; diseases of the eye, ear, nose and throat.

A diploma will not be required as a prerequisite for examination.

Formal application for examination will be made after the applicant arrives.

All persons who desire to practice medicine in this State must be examined irrespective of any certificates of qualification, obtained elsewhere, they may hold.

Reciprocity betwixt this State and any other State has not been established.

At least four days will be required to complete the examination.

The next examination will begin on Tuesday, the 16th of June, prox., at 9 o'clock a. m., in the Capitol at Montgomery. Persons contemplating presenting themselves for examination at that time will please give notice of such intention.

The fee for examination will be $10.00, payable on making application after arrival.

All applications, whether regulars or irregulars, must undergo the same examination. Materia Medica and the administration of drugs in diseases are omitted from the examination.

Temporary license cannot be given.

Samples of questions given in previous examinations will not be furnished.

W. H. Sanders, M. D.,
Chairman State Board of Examiners."

Office of the State Board of Health, Montgomery, Ala., Jan. 15, 1908.

## The Meeting of the Association of Surgeons of the Southern Railway.

The thirteenth annual meeting of the Association of Surgeons of the Southern Railway was held in this city April 28-30, with Dr. H. T. Lemon, of Washington, D. C., as president and Dr. J. U. Ray, of Woodstock, as secretary.

It was a most successful and pleasant meeting. There were over two hundred surgeons present. Quite a number were accompanied by their wives and daughters.

A splendid program had been prepared and some splendid papers were read. The President of the Southern Railway, Mr. W. W. Finley, delivered an instructive address.

Dr. W. A. Applegate, of Washington, D. C., the chief surgeon of the system, was present and added much to the success of the meeting.

Mrs. B. G. Copeland informally entertained the ladies attending the association at the Country Club on Tuesday afternoon. At night of the same day the doctors were given a smoker by the Jefferson County Medical Society. Wednesday afternoon a trolley ride and barbecue at the Country Club by the local members of the association were enjoyed. Dr. Geo. H. Stubbs, of Birmingham, was chairman of the committee of arrangements.

The meeting was a most successful one in every respect.

The following officers were elected for the ensuing year: President, Dr. B. G. Copeland, Birmingham, Ala.; First Vice-president, Dr. T. H. Bahnson, Winston-Salem, N. C.; Second Vice-president, Dr. J. H. Matthews, Macon, Ga.; Secretary-Treasurer, Dr. J. U. Ray, Woodstock, Ala.

The next meeting will be held in Jacksonville, Fla.

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# Personal Notes.

Dr. J. E. Garrison, who was wounded some time ago by a Mr. Williams, has, we are glad to state, so far recovered as to be able to be out.

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Announcement has been made of the marriage of Dr. Kennith Bradford, of Birmingham, to Miss Lilly Camp, of Talladega, to take place in June.

Dr. S. C. Carson, of Greensboro, was visiting friends in Birmingham and attending the meeting of the Southern Railway Surgeons' Association on April 29th and 30th.

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Dr. Michel Hoke, of Atlanta, was the guest of the Jefferson County Medical Society at its meeting on May 11th, and delivered a very interesting address on "Arthritism."

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Dr. James S. McLester, 830 South Twentieth St., Birmingham, wishes to announce that he will be absent from his office for purposes of study October 1, 1907, to October 1, 1908.

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Dr. B. D. Sibley announces that he has moved his office to the second floor of the First National Bank Building, rooms 227 and 228, where he will continue the practice of eye, ear, nose and throat work.

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Dr. Geo. S. Brown, of Birmingham, was married to Miss May Bradford, also of Birmingham, on the morning of April 22nd. They left for eastern cities immediately. Their trip will also be extended to Europe before their return to Birmingham.

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Dr. Richard C. Cabot, of Boston, was in Birmingham on April 17th, and addressed the Jefferson County Medical Society on "The Essentials and Non-Essentials in Physical Diagnosis." We give our readers a stenographic report of this address in this issue of the Journal. Dr. Cabot held a very interesting clinic at St. Vincent's Hospital at 3:30 p. m. of the same day, which was largely attended by the doctors of Birmingham.

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Dr. A. W. Meyer of the University of Minnesota and formerly of Johns Hopkins has accepted the professorship of anatomy in Northwestern University Medical School.

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Dr. A. N. Richards of the College of Physicians and Surgeons of New York City has been appointed professor of pharmacology in Northwestern University Medical School.

# Miscellaneous Notes.

PHYSICIANS ATTENTION.

Drug stores for sale on easy terms, etc., United States, Mexico, and Canada. Drug store positions. F. V. Kniest. Omaha, Nebraska.

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Nervous exhaustion and melancholic mania are relieved by Celerina in teaspoonful doses three times a day.

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Dr. John B. Murphy has resigned as professor of surgery and co-head of the department in Rush Medical College and has accepted the professorship of surgery and head of the department in Northwestern University Medical School and position of attending surgeon at Mercy Hospital.

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NOTICE TO ALUMNI OF THE TULANE MEDICAL DEPARTMENT.

It is important that all graduates of Tulane intending to be present at the meeting of the A. M. N. in Chicago, June 2d to 5th, should write at once to Dr. Hugh B. Williams, 100 State St., for information concerning the gathering of the alumni on June 2. Tulane headquarters will be at the Auditorium Hotel and alumni are urged to call upon their arrival for information. This is important.

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## NOTICE TO DOCTORS.

**For Sale—A Wagner Four-plate Static Machine.**

Guaranteed to be in *first- class* condition in every respect; no tarnish about it, as it has been handled carefully and given systematic attention. Get as good or better results from its use than when it was new.

Reason for selling is to get out of therapeutic x-ray work and do only surgical x-ray work. Have been in it ten years and developed an x-ray dermatitis and must quit. For price and other particulars, address or call on

J. R. Goodloe, M. D.,
Demopolis, Ala.

We desire to reassure our friends in the medical profession that Cactina Pillets contain only the therapeutic principles of Cereus Grandiflorus. No other species of cactus is employed in their manufacture, nor does any other medicinal ingredient enter their composition.

Sultan Drug Co.

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*Whilst the Formula of Tyree's Antiseptic Powder* is known to every practitioner, we deem this an opportune moment to submit, as additional evidence of its incomparable value, the views of those whose judgment of therapeutic agents of this class is universally accepted as authoritative in the highest degree. The confirmatory findings of such eminent authorities as Professor Kalusowski, of the George Washington University, Washington, D. C., and Professor William M. Gray, of the army Medical Museum, Washington, D. C., and the opinions, based upon repeated clinical tests, expressed by exacting and conservative practitioners are, we believe sufficient to establish the contention that Tyree's Antiseptic Powder is superior to any other product of a kindred nature, and that it affords results when they are extemporaneously combined. A trial package will be mailed free of charge to physicians if they will send their name and address to Mr. J. S. Tyree, Chemist, Washington, D. C.

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PEACOCK'S BROMIDES.

Peacock's Bromides is the finest bromide preparation on the market. The salts entering its composition are far superior to commercial bromides. This is easy to prove and has been proven by analyses. Thus, extemporaneous mixtures and substitutes are inferior to Peacock's Bromides; and, by the way, this accounts for the success achieved by Peacock's Bromides. Each fluid drachm contains fifteen grains of bromides.

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**PHYSICIANS** who desire to acquire a practical knowledge of the German language in a comparatively short time should apply to Professor Stahl, a native German, who comes highly recommended as an efficient instructor in German and cognate languages. Particulars given on application. Address

**P. C. STAHL, 313 N. 22d St.,**

**Instructor in German,**

Will be glad to translate from the German to English for the benefit of medical men.

## INSTEAD OF MORPHINE OR OPIUM.

We meet with many cases in practice suffering intensely from pain, where because of an idiosyncrasy or some other reason, it is not advisable to give morphine or opium by the mouth, or morphine hypodermically, but frequently these very cases take kindly to codeia, and when assisted by antikamnia its action is all that could be desired. In the grinding pains which precede and follow labor, and the uterine contractions which often lead to abortion, in ticdouloureux, brachialagia, cardialgia, gastralgia, hepatalgia, nephralgia and dysmenorrhoea, immediate relief is afforded by the use of this combination, and the relief is not merely temporary and palliative, but in very many cases curative. The most available form in which to exhibit these remedies is in antikamnia & codeine tablets.

The physician cannot be too careful in the selection of the kind of codeia he administers. The manufacturers of antikamnia & codeine tablets guarantee the purity of every grain of codeia which enters into their tablets. This not only prevents habit and the consequent irritation which follows the use of impure codeia, but it does away with constipation or any other untoward effect.

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## PRUNOIDS.

The following letter from Dr. James P. Hawes of Valois, New York, is typical of the complimentary expressions the Sultan Drug Co. of St. Louis, is receiving regarding their new product Prunoids. "I have practiced medicine for twenty years and all that time I have been looking for a laxative that would be pleasant to take, do its work nicely and QUIT there. I have never found it until Prunoids came. So pleasant to take and by all comparison the best that I have ever used." The Sultan Drug Co. will be pleased to send sample of Prunoids to any of our readers who will mention this Journal.

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## TYREE'S ANTISEPTIC POWDER.

A quantitative, qualitative, bacteriological and clinical analysis of this preparation is embodied in a most interesting brochure, which will be mailed physicians by the manufacturer, J. S. Tyree, at Washington,